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Is Alkaloidal Therapy On A Sound Basis?

WE WERE under the impression that, so far as this rather threadbare question is concerned, the war was over. We were congratulating ourselves that the time and energy and ammunition we had been obliged to expend each year in fighting for position in this matter could now be utilized in more profitable directions.

We had observed with some satisfaction (and a little pride) that even the heavy guns of the ultraconservatives in this country and Europe were capitulating and coming over to our side, and had breathed a sigh of relief—not so much for the cessation of hostilities themselves (for we rather love a scrap when we know we are right) as because it released that much of our forces for more urgent action elsewhere; and besides, any war becomes a trifle tedious after the end is once in sight.

It seems, however, that there are still some "snipers" in the field who cannot resist taking a desultory pot-shot at a victorious cause; and, trivial as this petty sniping may be, it is a hindrance and an annoyance, and gives the impression of incomplete conquest, and so it has to be silenced.

Thus, *The Therapeutic Digest*, in its May issue, breaks out with the impressive question: Do the alkaloids represent in any full measure the therapeutic equivalent of the drug?

The freshness pertains only to the outbreak, and the impressiveness only to the manner of the inquiry. As to the question itself, our contemporary must have been prowling around some old battlefield, baptized very early in the campaign, and picked up a worn and spent bullet, with which to prime its belated gun. Our friend reopens an antiquated argument that no one is using these days because it has long since been shown to have nothing to do with the alkaloidal principle at all.

It is amusing to note, by the way, *The Therapeutic Digest's* eager insistence that it is speaking, of course, of the fresh drug, because many of our most valuable remedies lose much of their virtue by evaporation, so that the alkaloid, *being of a stable character*, is all that is left to represent its therapeutic activity; apparently unconscious that it has inferentially conceded one of the strongest arguments in favor of alkaloidal pharmacology.

But to come back to *The Therapeutic Digest's* main point. It punctures the entire alkaloidal bubble with the off-hand assertion that the alkaloid and the whole drug are two entirely different things. Why, bless our

unsophisticated soul, so they are! How could we ever have been so pharmacologically blind as to imagine that in strychnine we were exhibiting the pharmacological principle of nux vomica, or that the one could be properly employed on therapeutic indications worked out from experimental data in the use of the other? What could we have been dreaming about to delude ourselves with the idea that morphine was the epitome of opium and could be depended upon to do the same clinical work?

The funny thing about it is that we never did think such foolishness, and certainly never taught it. A still funnier thing is that the galenists, who use this straw argument against the alkaloids, did and do standardize their whole drugs on these partial ingredients, as though they actually did represent all the pharmacological activity of the drug. It is no part of alkaloidal therapy whatever to pretend that the alkaloid is therapeutically identical with its parent drug; or even to contend that it can replace the parent drug. But it does insist that, where you use the parent drug avowedly for the action of this or that alkaloid which it contains, it is far more scientific and satisfactory to extract the alkaloid first, and give it for its own unmodified action.

It further insists that a very large proportion of whole drugs *are* thus used for the action of one of their alkaloids—are, in fact, as we have pointed out, standardized on their content of that alkaloid, regardless of the several other medicinal principles mixed in with the alkaloid, compromising and often antagonizing its action, which is very slipshod and unscientific, to say the least.

It still further contends that the isolated alkaloids, in virtue of their own definite therapeutic indications (not confounding them with those of their parent drugs) will cover a large part of the therapeutic field in a better, more effectual and more dependable way than the whole drugs—not all the field, but a large part of it. Wherever these conditions obtain that we have just cited—and what physician will be bold enough to deny their wide prevalence—alkaloidal therapy asserts its claim to those superiorities which our critic confesses it would possess *if*—etc., etc.

So, dear *Therapeutic Digest*, it turns out that all the inconsistencies, all the sophistries, all the contradictions, are on the side of the dyed-in-the-wool galenists. Nay it is they who are sectarians, not we. For we have done nothing more than to discern the inconsistencies and paradoxes of old-line therapy, and have furnished the means for eliminating them, while still recognizing and utilizing all that is right and good in the galenics. Although we have been using the term "alkaloidal therapy," because our critic used it, the fact is there really is no such thing as alkaloidal *therapy*. It is not a matter of therapy but of pharmacology. Its essential informing motif is the furnishing and proper utilization of therapeutic *agents* of the highest degree of purity and efficiency, for carrying out all that is best in current therapeutic science. These agents do not pretend to represent their parent drugs (except in so far as the parent drugs falsely pretend to represent them) or any other drugs. They represent themselves.

Active-principle pharmacology antagonizes nothing in all the broad field of current medicine, either in theory or in practice. It sets up no strange therapeutic gods, no new therapeutic law. It pretends to no therapeutic prescience. It exaggerates nothing, belittles nothing, not even the galenic drugs. Its object is to make of drug therapy a definite, scientific practice, worthy to take its place alongside all the other twentieth-century refinements which go to make of modern medicine a more and more exact science.

He who purposes to study medicine should have in high degree three gifts, not one of which is common among mankind, yet all of which he must have: the power of reliable observation, intellectual endurance, and loyalty.—Charles S. Minot.

THE FATALITIES FROM SALVARSAN

The eight deaths following the untradural administration of neosalvarsan-serum for nerve syphilis in one hospital in Los Angeles, all occurring within forty-eight hours, have brought home to the medical profession more strikingly then ever before the fact that salvarsan is not alone a useful drug, but a dangerous one as well. At least 275 deaths are known to have followed its administration, while in all probability the total number is several times this, since nearly every physician can tell of cases which have not been reported.

In a recent book upon the subject, Wechselmann brings out the important point that very many of these deaths from salvarsan may be attributed to the combined or alternated use of salvarsan and mercury. He declares that anything delaying the excretion of an arsenical preparation brings out the

toxic action of that drug and may cause a fatal issue. For this reason, he strongly advises against administering salvarsan *following* the giving of mercury, and especially of metallic mercury, inasmuch as the latter drug interferes with normal kidney function and thereby delays excretion.

The moral of his observation is, that before using salvarsan a careful chemical and microscopical examination of the urine should be made in every instance. Also, salvarsan and mercury in large dosage should never be employed together. And, finally, when the combined treatment seems to be indicated, the arsenical preparation always should be given first, and never, under any circumstance, after a course of treatment with a mercurial.

There is no denying the value of salvarsan, and we have no disposition to minimize the importance of Ehrlich's great discovery. Yet time has only served to teach the thoughtful physician caution in the use of this remedy, the injudicious administration of which we now know to be fraught with dangers little dreamed of by the average physician. Mercury still stands first as a specific remedy for syphilis. Not only is it safe; but its curative value is undoubtedly greater than that of salvarsan. The latter drug has its own place—but, for the present, it may well be left to men who are thoroughly familiar with its field and know best how to use it.

He who goes safely will go far. Our advice to the general practitioner is, Keep in mind that popular maxim, "safety first," even in treating syphilis.

The longer I live the more my mind dwells upon the beauty and the wonder of the world. I hardly know which feeling leads, wonderment or admiration.

—John Burroughs.

SOCIAL SERVICE FOR THE SICK

The French journals are discussing with approval Cabot's institution of a social service in the Massachusetts General Hospital. The attention of the entire staff has been centered upon the diagnosis and etiology; but the justification of all this preliminary work, says Mme. Nageotte Wilbouchewitch (*Ann. d. Méd. et Chir. Infant.*, Apr. 15), is the treatment. Yet, truly, in a considerable number of instances the physician finds himself powerless.

It is easy to tear off a leaf from a block and give it to a diabetic for his regimen, to order an anemic child to another climate, or a backward boy to a special school, or to direct a young man to abandon his work; but how can these things be done when neither patient nor doctor knows how? Somebody else must see that the doctor's orders are executed—he himself has not the time.

To meet this difficulty, Cabot created a social service, the essential role of which is, to apply the treatment prescribed by the physician, to overcome the obstacles and preserve the benefits. He had difficulty in persuading his colleagues that this, though desirable, was feasible. The hospital administration permitted Cabot to engage at his own expense the first employee. This was Miss Pelton, a woman of large heart, habituated to the sick, familiar with misery and the work of benevolence. A quarter of an hour after her installation a doctor asked her to see to the alimentary hygiene of a young mother whose child did well in the hospital but relapsed as soon as she took it home. Miss Pelton went to the home, helped get the meal, told the mother not to give the baby everything on the table, and the child had no more relapses.

The second case was that of a working girl of 18 who had Raynaud's disease and was absolutely powerless during the winter. As an "interesting case," she was welcome at the clinics; but nothing had been done for her. Her "cure" was simple—she should go to a warm country. But this was nobody's business. Miss Pelton saw the girl's employer and learned that she was a good worker. Then she found a place for the girl in Florida and, from a society founded precisely for this object, obtained the funds to send her there, and also secured a traveling companion for her, as the girl was inexperienced. The result was, a perfect cure of the girl, who otherwise would have been a hopeless invalid.

This service has extended in six years so that it now comprises nine paid employees and twenty-five volunteers. The work is now recognized as indispensable to that of the hospital. The work has been divided, separate sections taking care of the tuberculous, the nervous, young mothers, and hygiene and mechanical appliances. The assistant is present at consultations, seated apart until the physician directs embarrassing cases to her.

In the hospital wards the social service is different. Here the treatment is perfect, but the physical condition of the patient depends largely on his *morale*. The social worker creates around him an atmosphere of amity that was totally wanting previously;

she tranquilizes his mind as to the wellbeing of his family, writes his letters, upon his dismissal sees that the conditions are such as to favor convalescence, aids him in securing work, helps the mother of the family to put her house in order, sees that the sanitation taught at the hospital is continued, and much else. And all this is necessary, that the benefits of the hospital sojourn may not be lost.

Still more, Doctor Cabot demands that the social service correct the hospital routine, and in a way to educate the staff. This humanizing influence by no means is superfluous in such institutions.

The section on cooperation busies itself with the works of public and private assistance, which are infinite in number and which may be utilized if known. The social service incurs only such expenses as cannot be borne by any of them.

The service is directed by a committee of the hospital physicians, the administration, and the social workers. The annual expense is $55,000, the aid-workers receiving from $800 to $1500 a year, and they work from 9 a. m. to 5 p. m., with one month's yearly vacation. The volunteers are indispensable, and they render valuable services, but only when directed by the regular workers.

The plan appeals to our French colleagues so favorably that it is intended to establish a similar service in the great children's hospital in Paris.

A hair, they say, divides the false and true;
Yes; and a single Alif were the clue,
Could you but find it, to the Treasure-house,
And peradventure to the Master, too.
—The Rubaiyat.

ACIDEMIA: PREVENTION AND CURE

When Dr. Eugene S. Talbot was in France, he found the people a nation of soda-takers. The most popular of the French springs is Vichy, and its water depends for therapeutic efficacy upon its content of soda. Every pharmacy and every grocery displayed soda prominently in powder, tablet, granulated and effervescent forms. It would be a nice task for the idly curious statistician to compute how many tons of soda the French consume annually—how many French freight-cars it would fill, how many times around the world the popping corks would fly, and all that.

And all this alkali is needed to neutralize Gallic acidity, to relieve the Gallic blood of acidosis, preserve the Gallic equanimity, prevent the Gallic temper from exploding. Surely, the Teuton astride the Rhine ought to send his potash west at a special discount.

Acidemia is the compensation of poverty, the retribution for riches. The nervous energies being more and more absorbed by the brain, the available supply for the digestive apparatus is correspondingly curtailed. Men of affairs have no time to eat, let alone to digest. Unwittingly they drift into the habit of relying upon easily digested foods, supplying their nutriment with the least possible expenditure of force in utilizing them. Predigested foods, raw or rare meats, and coffee constitute the diet of the would-be millionaire. The roughage is cast aside, then the starches; and, hence, the nitrogenous acid-producers outweigh their natural neutralizers. Well is it if, in the hurry of business life, the man does not go further, even saving the time "wasted" in eating and, instead, sustaining his flagging energies with the deceptive cocktail.

Now comes the doctor, secures a hearing, and prescribes the customary average diet for a man! The man takes it, finds it takes too long to eat, and declares he can't digest it and work his gray cells at the same time; so, he concludes the doctor is mistaken. Every man is a law to himself; he has his personal peculiarities differing from the doctor's, and among them is the fact that he cannot eat such food without feeling logy and oppressed in the stomach.

It is hard to reform a man piecemeal and correct his sins against his body one at a time. Radical reforms do not commend themselves to him—what he really wants is that you shall enable him to go on sinning.

An impaired digestion must be restored systematically. The business must be rearranged to suit; and right here the patient stops—he won't do it. You may be a man of force enough to put the matter so plainly that he must see it, and choose between seven years of dragging an ailing frame to his grave at fifty-five, or living in health until he is years ahead of the alloted three score and ten. Most men are so constituted that death in a few years seems a long way off—and then, perhaps, they may cheat it by some sharp trick.

Now, acidity is the easiest thing to relieve: Take just a little soda, or a sip of diluted ammonia, or some milk and lime-water, or one of the more elegant antacids. Pyrosis quickly subsides under manganese; nausea is relieved by cerium oxalate and bismuth. Any of the sulphocarbolates stops fermentation. Neutralizing cordial goes fur-

ther: it clears the bowels, and incites all the digestive secretions—an admirable remedy.

Pepsin with hydrochloric acid digests albuminoids; pancreatic extract and bilein starts the appropriation of fats; diastase initiates the digestive disintegration of carbohydrates, which is generally at fault; or, papayotin comes in and digests the entire dinner, from the oyster to the nuts.

More: A minute granule of hyoscyamine relaxes gastric or intestinal spasm; another of copper arsenite stops bacterial operations; and one of quassin whips up the flagging appetite, while one of strychnine energizes all the rest, and every nerve, from the cerebrum to the toes.

Gastric catarrhs give way to bismuth subgallate, guaiacol, the oxides of silver and of zinc; or to resorcin. Gastrointestinal pains subside under the mydriatics or cannabis indica. The production of acid neutralized by alkalis, is stopped by atropine.

Emetine clears the liver of accumulated toxins, incites the digestive secretions, and jugulates many an unsuspected horde of amebic invaders. In fact, it does so many things so well that it is a good thing to give on general principles.

The evening granule of podophyllin and the morning saline-laxative draught go far to remove the underlying cause of the trouble.

With all this wealth of really effective therapeutic weapons at our hand, admirably suited to the needs, and certain to relieve when wielded by a skilled hand, there is one indication unmet, one symptom overlooked—the patient.

Nature is remorseless, unmovable. Its laws are more fixed than those of Mede and Persian. There is no such thing as evading or deceiving nature. Plunge over Niagara, and you are crushed. Wade into a quicksand, and you are engulfed.

To cure the man, he must be taught how to live a natural sanitary life, and why. He must be taught to work up to his natural capacity, but stop there; to take the kind and quantity of exercise that he needs; eat and drink the things he should, and allow time during digestion for that function to have its needed supply of blood and nerve-force; sleep when sleep is needful, rest at appropriate intervals. I am one of those who believe a man can do more and do better work in six days than he can in seven, more in eleven months than in twelve; that a Sabbath spent physiologically—religiously—will be followed by a week in which all the bodily energies work at a higher ratio of efficiency.

Further, get the man to consider what all this is for. A man who works without a definite object, or one commensurate with the exertion, is like one riding on a railway that has no terminus—he just rides.

What is the object of work?

Happiness.

When can you be happy, surely?

Today.

Then make sure that each day gives you its full quota of happiness. The man who waits for some indefinite future to realize his enjoyment is a blind imbecile.

Count that day lost whose slow-descending sun
Hears not our hearty laugh, sees not one good deed done.

Let us get rid of our false estimates, set up all the higher ideals—a quiet home; cultivate vines of our own planting; a few books full of the inspiration of a genius; a few friends worthy of being loved and able to love us in turn; a hundred innocent pleasures that bring no pain or remorse; a devotion to the right that will never swerve; a simple religion empty of all bigotry, full of trust and hope and love; and to such a philosophy this world will give up all the empty joy it has.

—David Swing.

KEEPING OUR OWN DOORSTEP CLEAN

For a long time we have watched with admiration the course of the medical organization in Ohio. It has appeared to us to be in a remarkably healthy condition, and to be setting the pace in progressiveness and achievement to many other state societies. Now we know at least one reason for its soundness and virility; we understand the secret of its influence in promoting the sanitary condition of the streets of Jerusalem. It practices the salutary habit of keeping its own doorstep clean—a practice which is highly to be commended to medical organizations individually, and to organized medicine as a whole.

The Ohio State Medical Association has made official request for the names of members of the profession in Ohio who are arrested and convicted of improper practices relating to the dispensing of narcotic and habit-forming drugs, with a view, of course, to subjecting the offenders to disciplinary measures, including suspension or expulsion from the Association, and possibly even the instigation of proceedings for revoking their licenses to practice. This is a step in the right direction; a step, indeed, which any self-respecting organization could scarcely refrain from taking.

It is useless to attempt to blink at the fact that the medical profession is, after all, an

aggregate of human beings, and cannot fail to have within its ranks a certain proportion of rascals. Of these there is no worse type than the physician who so far forgets himself and his high obligations as to become a distributor of narcotic drugs for improper purposes. Men of this character are a discredit and a disgrace to the profession, and organized medicine should not wait for public censorship to demand their removal, but should purge itself of them by its own unequivocal action, following the example which the Ohio Association has set.

In times gone by it used to be the traditional pride of the professional and craftsmen's guilds that the adjustment of mere economic relations, whether among their own fraternity or as between them and the public, was a secondary object of their organization, the prime object being the betterment and uplifting of the art or craft which they represented, both from a professional and a moral standpoint. It is a common complaint frequently urged against the trades unions of today that they direct all their energies toward obtaining a maximum wage for their members, and that they do nothing whatever to insure the said members being individually worth such a wage.

It is to be hoped that in organized medicine, which prides itself on standing upon a different footing, high traditions and lofty ideals will continue to prevail to the extent, at least, of maintaining a high standard of moral rectitude within its own ranks. There should be no more severe and exacting censor of organized medicine than organized medicine itself.

He who makes war on business removes the roofs from homes, takes the bread from mouths, leaves human bodies naked to the storm—replaces confidence with fear, hope with dread, love with hate—and robs men of their right to work.—The Fra.

THE DOCTOR'S VACATION

Some weeks ago one of our friends made the suggestion that we give the readers of this journal a chance to tell something about summer vacations. He thought it would be a good idea to rest a bit from our usual program of scientific and practical articles, giving room to a few papers showing the doctors how to have a good time. "Make the number a picture gallery," he added, "and let us hear from everybody."

We always appreciate suggestions from our readers, and if they are good, we try to follow them. We did so in this instance, and the many pictures and the various articles upon "The Doctor's Vacation" appearing in this number of CLINICAL MEDICINE are the result.

However, we know that many of the readers of these interesting articles will declare they cannot afford vacations. Perhaps some of them will think the space devoted to the topic wasted, although I do not believe anyone who takes the time actually to read the articles will feel that way about them. To these men I want to say just a word. If you cannot afford a vacation away from home, plan to have one anyhow, right where you are. I am reminded of the experience of one of my friends, who one year refused to go into the country for his usual summer vacation. He didn't care anything about fishing, he wasn't strong for boating, golf, or any of the other usual forms of summer diversion, but he did enjoy a good game of baseball. So, he remained at home in his own comfortable apartment, got up in the morning when he felt like it, and took in a baseball game every afternoon. He declared that during that summer he had the time of his life.

Why some doctors want a summer vacation really "gets" me. For instance, if I lived in such a delightful place as my friend Dr. Richard Slee, whose home is nestled right in the midst of the Pocono Mountains of eastern Pennsylvania, you couldn't drag me anywhere else when hot weather came. I visited the doctor last week, at his beautiful home at Swiftwater, and can understand why *he* cannot be lured away at this season. With a trout stream singing at his door, with Nature's own decorations in the way of azaleas, rhododendrons, and other wild flowers lavishly painted on to the scenery everywhere, with thousands of acres of forest-covered mountains as a background, the Pocono country seemed to me one of the most delightful summering places in the world. (If you are looking for a restful place, Doctor, take your auto, your family, and yourself to the Swiftwater Hotel, right beside that singing brook. Also, ask Slee to show you how diphtheria antitoxin and smallpox vaccine is made.)

But I am wandering from my story. There are thousands of doctors who live in places just as delightful as Slee's; thousands of others who can get more rest out of a game of baseball than they could on a hotel veranda; and many thousands more who would enjoy little trips around home more than anything else. Look over the advantages of your own

country before deciding to take a long and expensive trip to places you know nothing about. And it may be that a winter vacation would suit you better than a summer one. More doctors should go south in the winter, just as more southern men should come north in the summer.

After all, it isn't where you go so much as what you do that counts. Plan to have a good time this summer—that's the main thing. We travel through this world but once; and the best things we get out of it are not money, or position, or the praise of men. There is nothing better—there can be nothing better—than to view the beauties of the world with seeing eyes; to taste the delights of healthful, care-free living out-of-doors; to know men and women as they really are when untainted by the money-lust; to love and be loved; to be in harmony with all that lives and breathes. These are the real things which count the most toward happiness. Any vacation that doesn't help you to their attainment isn't worth time, trouble or money. Stay at home, if you can get the most of this kind of "restfulness" there; but don't miss some kind of a vacation this summer.

I don't care what walk of life a man may be in, if he has industry he'll be a success. Initiative and enthusiasm add to the measure of his success—and tact adds still more, but few there be that either possess or try to acquire the full string. When you do find one with all these qualities you'll find a fellow heading for the front row.—Henry D. Wilson.

THE TREATMENT OF CONVULSIONS

To the mother nothing is more appalling than to see her child struggling in a convulsion. There is one picture vividly painted on memory's pages, of a young mother clasping her first-born child to her bosom, the convulsed features of the babe, the agonized expression of the mother as she exclaimed: "That ever I should have lived to see this!"

Wild "S. O. S." calls are sent out in all directions for help—help effective and immediate. Aunty rushes to the telephone; sister speeds up the street in search of a doctor's sign; nursey stands on the doorstep and anxiously signals anybody who looks or smells medical. This is the gate of opportunity that opens for the young doctor who is gnawing his mustache ends in lonely solitude while all the older practitioners are out making their round of calls.

The youngster gets first to the scene—but what is he to do? Something, and that p. d. q. He must get busy. The family are dying for action and he must take command. So, if he be wise or prescient, he begins by putting everybody at work. One is sent to heat water, another for flannels, a third to the pharmacy. People simply cannot keep still and see the poor child suffer. They must do—what they do matters little.

Meanwhile, the doctor is trying to think what *he* shall do for the child. Visions, words, memories flash across his consciousness kaleidoscopically — epilepsy, catalepsy, eclampsia, uremia, poisons, worms, infectious fevers, what not? There is no time for diagnosis. He must act now and diagnose later.

First, look to the alimentary canal, which is the seat of trouble in ninety-seven cases out of a hundred. What has the youngster had to eat? You are suspicious—justly so. Whip out your hypodermic and shoot a dose of apomorphine under the skin at once. Pretty soon the stomach will supply the diagnosis, and another war is over. Then comes the etiologic inquiry—where did that child get bologna sausage or green fruit? Who allowed it?

Or perhaps the hardness of the belly or the presence of "knots" in it shows intestinal spasm, and hyoscyamine in full doses with a few small swiftly repeated doses of calomel, followed by saline laxative, work the cure.

Accept the diagnosis of worms as probable and go after the helminths with calomel and santonin, and you generally get them. Whether they had anything to do with the child's health may be uncertain, but few things win a mother's gratitude more heartily, and you may safely assure her that the worms were not doing the child any good.

An emetic, calomel, a purge and a hot mustard bath comprise pretty nearly the therapeutics applicable for non-febrile convulsions. There is something peculiar about the action of calomel here. How it acts I do not know; that it *does* act and quell the convulsive tendency I know, as does many another doctor. The hot bath is a grand revulsive; it brings the blood to the surface, unloading the cerebral vessels, and tremendously stimulating cutaneous elimination.

When the convulsions are of emotional provocation the treatment above described is effective. No woman can be hysteric and vomit at one and the same time. The worst-spoiled child will behave rather than turn its stomach inside out. But the valerate of zinc or cicutine, a granule of either dissolved in the mouth, repeated every five minutes, will be pleasanter to the patient, and soon results in the restoration of self-control.

When there is fever, the story is different. The convulsion may herald the outbreak of an eruptive fever, or be indicative of cerebral oppression, perhaps preceding paralysis. The application of cold is the modern substitute for the lancet, and I am ungrateful enough to the modern teachers to believe that the venesection was quicker, surer, more effective and not a whit more dangerous, than cold as applied on emergencies in private families.

The pulse-tension may demand a speedy administration of veratrine, here preferable to aconitine, because the hellebore so powerfully influences the eliminants, while quelling circulatory excitement and steadying the myocardium. A full dose of pilocarpine brings out delayed eruption, but so does its direct antagonist atropine, and the choice must depend on the case. I prefer atropine in depressed conditions with cool skin and low temperature. In puerperal or uremic cases nothing relieves so promptly as bleeding, nor so surely as veratrine. A half pint of saturated solution of table salt, ice cold, thrown into the rectum, is a powerful revulsant and never fails to act on the bowels. The exosmosis provoked carries out a great deal of the toxins.

The subsequent treatment depends on the diagnosis. We shall not discuss it here, for by this time the regular family doctor has arrived and we resign the case to him. But for good or ill, our conduct of this case has gone far to establish a place for us in the estimation of the community.

It is not in human nature for individuals to do great service to their fellow men and not occasionally be punished for it. They induce men for a time to set reason and high ideals above the instincts of the herd, and sooner or later the herd must turn and trample them.—Gilbert Murray.

PAINLESS CHILDBIRTH: A WONDERFUL "DISCOVERY"

Once again the potent charm of the "Made in Germany" stamp on things relating to medicine has exemplified itself in a popular article recently printed in *McClure's Magazine* under the title of "Painless Childbirth."

The article is an interesting one, yet many thousands of women in this country, who neither have the opportunity to go to Europe, nor the inclination to achieve the éclat of such a pilgrimage, have been enjoying, in their own homes, for a number of years, the satisfying experience of painless labor under the influence of hypodermic injections of hyoscine and morphine.

The procedure is already well known to thousands of physicians in the United States, has been unostentatiously practiced by them for at least a decade, and long ago passed out of the experimental stage into the established routine of the lying-in room. But it needed that such a beneficent innovation should be postmarked from a German center of medical activity and that a few Europomaniacs should undertake a pilgrimage to some clinic in far-off Germany, to give it the transatlantic flavor necessary for journalistic exploitation in this country.

It really is astonishing how the popular journals of this country, otherwise so alert and up-to-the-minute in every other direction, lag behind the procession in matters pertaining to medical science and practice and allow themselves to be hoodwinked by the glitter of a foreign label on goods that have long passed current in their own homeland.

One is almost tempted to suspect that such an article as the one referred to crept into the reading-pages by mistake (or otherwise) and properly belongs in the paid advertising-space. At any rate, the net effect of such conspicuous publication is to blow the horn of the Freiburg clinic and to create the misleading impression that it is necessary to go thence in order to enjoy the advantages of the socalled "twilight sleep."

To be sure, some of this erroneous influence will automatically be counteracted by the woman readers asking their family physicians about the matter and learning then, if they did not know it before, that the procedure is a comparatively old one and can be taken advantage of in their homes just as well as in far-away Freiburg. Even the handsome young interne who bends over the fluttering patient and gravely and kindly says, "I have come to comfort you," as also the tactful nurse, with her personal magnetism and good looks, can, at a pinch, be duplicated here.

Still, there also will be, on the one hand, a certain proportion of our women folk who will straightway become obsessed by the "made in Germany" craze and cast about in their minds for potent persuasions wherewith to assail their husbands for a trip to Freiburg (in which set-to's they, of course, usually win out); while, on the other hand, there will be that other contingent, who will hopelessly resign themselves to forego the wondrous twilight sleep because of their inability to undertake the journey, forgetting that their own family physician can give them its benefits in their own homes just as well.

Now, to both these classes our alert American physicians must address themselves, in an effort to convince these women that there is balm in Gilead and there still are physicians there —that Abana and Pharpar, rivers of Damascus, are no better than the waters of Israel.

However—nevertheless—notwithstanding, —and for all that—there is for us of the medical profession a lesson in this rather sensational article in *McClure's Magazine*—not *in* the article, precisely, but suggested by it.

The lesson itself, albeit an old one, nevertheless is worth recalling and emphasizing. Years ago we pointed it out, and we have been iterating and reiterating it ever since.

The attention of our readers' is called to the fact that a detailed account of this work done by Doctors Kroenig and Gauss at Freiburg was published by us as long ago as in our issue of May, 1907—just seven years! And we pushed home the lesson then of the great importance Gauss placed on the purity of the mydriatic alkaloid and the accuracy of its mode of administration. We insisted then, and we insist now—as does Gauss—that "scopolamine does not as yet possess the purity of most of our drugs;" and that the surgeon and obstetrician should use a *pure hyoscine*, which, while chemically it may be identical with commercial scopolamine, therapeutically is not always the same, and that this alkaloid must be free from impurities.

As to the exact manner of giving the combination, two points are to be emphasized in Gauss's procedure; namely: first, the asphyxia, or oligopnea, is due chiefly to giving too much morphine, and not to the scopolamine or hyoscine; and, second, that the dose is to be gauged, not by the pain-cries (which continue regularly during the twilight sleep), but by the memory test. It is the neglect of these precautions that has served to discredit the procedure wherever it is discredited, and, conversely, strict attention to them that has brought about brilliant results where it has been successful. To which we may add that the well-known tendencies of scopolamine, or hyoscine, to disturb the pulse certainly justifies the addition of cactus to the combination, for the purpose of steadying the circulation.

We trust that nothing we have said here will be construed as intended to belittle the work of Gauss and Kroenig. These men are doing splendid work, and for this we take off our hats to them. But, to suggest that they have a monopoly in this painless-childbirth business by means of scopolamine (better, hyoscine) and morphine—that is to laugh.

To explore the most secret depths of the unconscious, to labor in what I have called the subsoil of consciousness, that will be the principal task of psychology in the century which is opening. I do not doubt that wonderful discoveries await it there, as important, perhaps, as have been in the preceding centuries the discoveries of the physical and natural sciences. That, at least, is the promise which I make for it.—Henri Bergson.

THE PROMISE OF EMETINE!

A doctor may but rarely take his own medicine, but this doctor has just devoted a useful hour to reading several back numbers of his own journal.

Emetine! The medical profession, it seems, made a momentous discovery! Hear the editor of *American Medicine:* "Emetine as a specific for amebic dysentery and amebic hepatitis is probably the most important therapeutic discovery in recent decades."

And, yet, ipecacuanha was first introduced as a specific for dysentery and the secret of its use purchased by the King of France—so long ago as the time when kings had France—and published to the world. Since that time ipecacuanha has lingered on the horizon as one of the remedies for dysentery, some writers according it honorable mention, more authorities ignoring it.

In what, then, consists this great discovery? Simply that, when we employ the isolated active principle, separated from conflicting principles, we win brilliant successes in those maladies in which the crude drug had proved moderately though unreliably useful. And therein lies the sum total of that for which we "alkaloidists" have been contending.

Open your eyes a bit wider. Stretch your field of vision. You know well the uses to which morphine, strychnine, atropine, quinine may be put—uses that are not possible with opium, nux vomica, belladonna, and cinchona. You virtually have deserted jaborandi, calabar-bean, coca, parsley, quebracho, coffee, colchicum, elaterium, hyoscyamus, yeast, cocculus, willow-aments, wintergreen, wormseed, scoparius, strophanthus, and the kino group for the definite agents pilocarpine, physostigmine, cocaine, apiol, aspidospermin, caffeine, colchicine, elaterin, hyoscine, nuclein, picrotoxin, salicin, salicylic acid, santonin, sparteine, strophanthin, and tannin. Just so our predecessors abandoned the epsom water for magnesium sulphate, or the crude calamin, galena, and orpiment for the pure zinc, lead, and arsenic compounds.

Does it require such a herculean effort to take one step more and see whether similar improvements cannot be secured by abandoning the feeble arbutus group for arbutin, aconite for aconitine, hellebore for veratrine, agaric for agaricin, aloes for aloin, pulsatilla for anemonin, golden-seal for berberine and hydrastine, ox-gall for bilein, bryonia for bryonin, conium for cicutine, condurango for condurangin, lily of the valley for convallamarin, foxglove for digitalin, horse-chestnut for esculin, yellow jessamine for gelseminine, elecampane for helenin, lobelia for lobeline, podophyllum for podophyllotoxin, quassia for quassin, bloodroot for sanguinarine, and bull-nettle for solanine?

For twenty years we have been urging upon you the superiority of emetine over the crude ipecac. Now it dawns on you that we were right. Just try and see how "right" we have been all along the entire line.

Ideals and desires and imaginations are the peculiar possession of young people, not because young people are cleverer than old, nor yet because they are less wise; but because the poet or philosopher or martyr that lives, half-articulate, inside most human beings is apt to be starved to death in the course of middle life. As long as he is still alive, most of them have the key to understanding poets and dramatists.—Gilbert Murray.

HOT-WEATHER HABITS

What advice shall we give to our patients and our clients as to their mode of living during the hot weather which is now close upon us? When I thought of delivering a little preachment on this subject, I went to that section of the editorial library which is devoted to the problems of health and hygiene and took down, one after the other, the twenty or thirty volumes reposing there that purport to deal with the principles and practice of right living, and proceeded to search diligently, the tables of contents and the reading-matter itself, for some systematized information upon hot-weather hygiene; but I found it not—which I consider quite remarkable, and I here and now call attention to this matter as a suggestion to any author who may be revising or thinking of writing a textbook on this subject. So, whatever I may say for the behoof of our readers, I shall have to evolve out of my own inner consciousness—like the man who made a fiddle, I shall have to "make it out of my own head."

It ought not to be a difficult matter to work out a set of "rules of conduct" for the hot-weather period, if one will but bear in mind the peculiar physiologic conditions to which the long-suffering human body is subjected by reason of the climatic extremes of the summer time. Please note that I said *extremes*, in the plural number; for the extremely high temperature of summer by no means is the only exigency that one has to reckon with. Equally important, if not, indeed, more serious, is the extreme of humidity which in many regions so commonly accompanies a high temperature, but without which the element of sheer heat is not, as a rule, particularly trying.

Figuring in the humidity-factor, then, the stress of hot weather upon the body-economy may broadly be resolved into two prime considerations; namely: (1) The heat of the atmosphere exceeds that of the body itself, so that the body is at least estopped from losing any of its own heat, and often actually is forced to absorb heat from the outside; and (2) the concentration of moisture in the surrounding air is of such a degree that the body is deprived of the process of evaporation as a channel for the disposition of excess heat.

From this it will be seen that hot-weather hygienic measures must be directed toward the relief of the two conditions named; and their aim should be a fourfold one: (1) to reduce heat production in the body as nearly as possible to the limit of the body's own requirements, so that there may be only a minimum of excess heat; (2) to prevent the absorption of heat by the body from the atmosphere; (3) to promote *mildly* the activity of the sweat-glands; and (4) to provide for the carrying off of the body-moisture excreted by the skin.

The first of these ends is to be attained by cutting down the oxidation-processes of the body to a minimum, by restricting both diet and exercise, especially the former. All high-calorie foodstuffs should be discarded, a large place be given, instead, to those articles which assist in elimination, such as fruits and light-green vegetables. Of proteins and heavy carbohydrates, no more should be taken than is absolutely necessary—and that is very little; of hydrocarbons, practically none at all. Violent exercise should be interdicted; it is a mistake, though, I think, to abandon exercise altogether, both because light exercise mildly stimulates sweating and also because it keeps one's mind cheerful and contented.

The second object, the prevention of heat absorption by the body, is largely a matter of clothing. As a matter of fact, of course, the temperature of the air can be considerably

in excess of that of the body without the body absorbing any heat, because the healthy skin is a good insulator. Continued exposure to a very high air-temperature, however, will at last force heat into the body. Our best protective measure here is, to imitate and reinforce nature's method, that is, to employ clothing that will insulate without smothering. For this purpose, it is necessary that the clothing possess three qualities: lightness, porosity, and reflecting power, which last is best attained by a light-colored outside and a dark-colored lining.

Activity of the sweat-glands is best promoted by light exercise and a daily light rubdown. It is necessary, of course, to drink more water in summer than in winter, in order to provide for the loss of body-fluid; but simply to swill water, as some people do, is about as bad as not to drink enough. It is useless to drink more than the sweat-glands are able comfortably to take care of, thereby water-logging the system. Indeed, for those who do hard physical work, it is positively dangerous. If the climate be dry, the moisture resulting from perspiration will quickly evaporate; but if the humidity be great (as it usually is) some special provision must be made for carrying it away, of which the chief means are absorbent underclothing, frequently changed, and frequent warm or tepid baths. Cold bathing is a mistake.

Needless to say that worry is the arch-enemy of health and safety in hot weather; and that not because worry directly affects any one of the conditions we have considered here, but because the balance of the body-economy is in a most precarious state during hot weather and worry upsets it more quickly and disastrously than anything else within the range of common human experience.

A WARNING TO LOUISIANA PHYSICIANS

Every physician living in Louisiana should write his representatives in the state legislature to see that his interests are protected before the Samuels' bill, which has already passed the House, is permitted to become a law. This bill apparently is modeled after the Boylan bill passed by the New York legislature, but it goes considerably further.

Under the provisions of this bill, physicians are not permitted to dispense narcotic drugs (opium, its alkaloids and derivatives, and chloral) except upon prescription. The only exception is in the case of domestic and proprietary remedies containing small proportions of narcotic drugs.

Please note this: the sales of proprietary and domestic remedies containing opiates and chloral are exempt from restriction. In other words, the patent-medicine men may sell their wares unhampered to anyone, while *the doctor is not to be permitted to dispense any narcotic drugs, no matter how small the quantity or how harmless the combination except upon a prescription.* Furthermore, to every patient for whom he prescribes a hypodermic injection of morphine, a few cough tablets, or a diarrhea remedy containing opium or chloral, the doctor must give at the time a certificate indicating the name and address of the patient, and in addition he must keep for every patient, an exact record of the drugs dispensed, this record to be preserved for a period of five years and to be open to official inspection.

We strongly advise every Louisiana physician to demand that this bill shall be so amended that it shall not, so far as the proscribed narcotics are concerned, interfere with or prevent any physician, dentist or veterinarian from dispensing them in the course of his professional duties, providing he does so in good faith, and not for the purpose of evading the provisions of this law.

We also may be permitted to express the hope that influential members of the medical profession in Louisiana, men like Dr. Oscar Dowling, president of the State Board of Health, and the officers of the State Medical Society, will see to it that this bill is carefully scrutinized in every particular, and that its inconsistencies, dangers, and all unnecessary professional burdens are eliminated before it is passed.

Another thing. It has been stated to us that New York's Boylan bill is so filled with contradictions, is so defective, that it will, undoubtedly, prove unconstitutional. This only shows that instead of rushing through half-considered and dangerously defective legislation in our state legislatures, the strong men in our profession ought to be uniting their energies for the passage of the Harrison antinarcotic bill, which, as passed by our national house of representatives, is a safe, sane, and carefully thought-out measure and one that will prove effective.

Every doctor should get behind this Harrison bill *now*, writing his senators to see it through at once—and *in the form passed by the House*. He should certainly object to the amendment requiring physicians, dentists and veterinarians to keep for two years a record of all narcotic drugs dispensed, in a special book. This amendment has just been tacked

on to the Harrison bill. It would include records of hypodermic doses, local anesthetics, cough tablets, diarrhea tablets—every dose of a narcotic the doctor might administer.

If the Harrison bill were to become a federal law, it could be used as a model for the individual states; when some degree of uniformity at least naturally could be expected in this important matter. Fight for it but oppose dangerous amendment.

But once more as to the Samuels' bill our professional brethren in Louisiana should demand and in no uncertain tones, that it be held up until the draft is known to be right, from the doctor's standpoint—which is the standpoint of the suffe ing sick whom he serves, and whose interests it is his duty to protect.

LATER.—We have just learned that the Samuels' bill has been indefinitely postponed by the legislature by a vote of 39 to 28. An effort to revive it was subsequently voted down. Louisiana doctors are evidently awake.

If there be a love, here or hereafter, higher, more sacred than the love of mankind for mankind, of lover for lover, we shall come to it in good time. While yet men we shall do well to love as men. Only first loving as men could fit us to love as gods.—Harry C. Morse.

DIABETES—BACK TO AVICENNA

A native of Tunis familiar with the Arabian tongue, Doctor Dinguizli, has attracted considerable attention by his resurrection of Avicenna's method of treating saccharine diabetes. Avicenna, that illustrious Arabian physician, of whom we all know, of course, lived in the twelfth century. His work is known today only through Latin translations, which, unfortunately, are full of inaccuracies.

Dinguizli, who is an accomplished Arabian scholar as well as physician, had employed the modern methods of treating diabetes, but without much satisfaction. Turning, at last, to Avicenna, he found the disease described without the omission of a single leading symptom. In the treatment, he forbade the use of sweet fruits and aliments, because "sugar augments combustion in the body and, consequently, the animal heat." That was his entire regimen for the patient. But Avicenna made use of some plants not now known in medicine or else looked upon merely as the vestiges of a forgotten pharmacopeia. Among these plant remedies were fenugreek, lupine, and wormseed.

Thereupon Dinguizli began to prescribe those drugs; not, indeed, from blind attachment to the instructions of an old coreligionist, but because the modern treatment had failed him. Administered separately, the remedies of Avicenna did nothing; but when given in conjunction (in cachets) they proved effective. Under their influence, Dinguizli found the polydipsia and concomitant polyuria to disappear; and the urinary sugar fell to zero, except for some traces, which he attributes to the glucosides in the medicaments. The general state of the patients improved *pari passu*. Illustrations from practice accompanied his work, which he presented to the Academy of Medicine, showing the evident beneficent action of the preparation, harmless, yet very effective.

Professor Robin tried the remedy in the case of six patients, some being very grave, with acetonemia and albuminuria; and he reports as follows:

"One cannot form definite judgment on this treatment of diabetes, because of the small number of patients treated, and also because no biochemic study has been made of the plants employed. But the preparation has not given rise to any inconveniences, while it has caused the glycosuria to disappear in three cases and reduced it considerably in three others. The treatment seemed to act better when added to the classic regimen for diabetes; but with the three in whom the sugar disappeared this was unnecessary. The acetone substances and the traces of albumin disappeared in one patient, and the traces of albumin in another, who was *un grand diabitique*."

M. Bournigaut also tried the treatment of Avicenna, with results quite as strongly corroborative.

A few such notable examples, and we shall see the return to drugs accelerated with a rush. One great mistake we make is, in forgetting that these old sages were quite as close observers as we, and probably more so, as they had no instrumental aids. Those men of old were quite able to judge of the action of remedies, and their results often were as good as the best we can boast today.

NITRITES AND THE HEART

K. Schloss, of the Poliklinic of Freiburg after a series of animal-experiments, arrived at the conclusion that nitroglycerin (glonoin) is the most efficient of the nitrites, and especially preferable when, as in arteriosclerosis, it is desired to effect a prolonged insanguination of the heart.

Leading Articles

Experiences With Nuclein in the Treatment of Insanity*

By FRANZ HAUBER, M. D., Rufach, Germany

Of the Ober-Alsassichen Heil und Pflege Anstalt—Doktor Gross, Direktor

INSPIRED by the success of Fischer, Donath, Van Wagner, and Pilcz in the treatment of progressive general paralysis with tuberculin and nuclein, the author started his work along these lines in 1910, and has continued systematically since then. The preparation employed by him is sodium nucleinate; this substance being preferred to tuberculin—which not always is harmless—while having the same general effect as the latter. All paretics were subjected to the treatment, as were also all the completely demented paretics—for the sake of control—although no results were anticipated in their case.

After the first favorable results, especially those obtained in recent cases of general paralysis, the author extended his experiments also to cases of dementia præcox. All those relatively recently diseased, especially the excited catatonics, received the injections systematically; for experience had shown that in them periods of improvement would occur sooner than in the inveterate. A few cases of manic-depressive psychosis also were treated with nuclein.

The Solution of Nuclein Employed

The solution for injection, always freshly made, was prepared according to Donath's formula, [1] viz.: sodium nucleinate, Gm. 10; sodium chloride, Gm. 1; distilled water, Gm. 100. At first a 2-percent solution was used, but later one of 10-percent strength; but still later the author returned to the 2-percent solution, for certain reasons to be explained further along. At the beginning, physiologic salt solution was injected simultaneously with the nuclein, but later this was omitted, since there was no difference in the results obtained.

As a rule, the injections were given every four to eight days. The nuclein administered in one of such courses amounted to 8 to 12 Grams. Later the doses as well as the number of injections were increased, so that eventually in the course of one such "cure" from 20 to 25 Grams of nuclein would be administered. In a few cases of general paralysis, the course was repeated one or more times, with intervals of a few weeks between, so that in the course of these three or four injection-series the patient received altogether from 35 to 45 Grams of nuclein, and in this way the leukocytic reaction was induced and intermittently maintained over several months.

In general paralysis, the nuclein "cure" was at first combined with more or less energetic antiluetic treatment, according to the nature of the case; but as a rule the following scheme was the one adopted: Before initiating the "cure," some arsenic and iron preparation; next, potassium iodide (1 Gram three times a day) for several months; then simultaneously with the nuclein, or alternately, a mercury preparation and salvarsan, in doses of 0.3 Gram, intramuscularly.

The preparation that seemed to be most suitable here were: arsenferratose, potassium iodide, and enesol (mercury salicylarsenate). In some cases of dementia præcox, it was found convenient to administer, together with the nuclein and arsen-iron, some organi-therapeutic preparation, preferably thyreoidin, as a rule.

No local anesthesia was induced before making the injection; still, if the patient was very sensitive or showed dread, a sufficient tolerance was obtained by giving small doses of scopolamine-morphine.

Generally the injections were painful, but especially so the 2-percent solution, owing to

*This paper, in its rendition into English, has been much condensed from Doctor Hauber's original paper published in the *Zeitschrift fuer die Gesammte Neurolgie und Psychiatrie.*

the large amount of liquid introduced and the longer duration of the process. Since only fresh sterile solutions were used, not much local irritation developed, while formation of abscesses was completely avoided, excepting in one single case. However, often a painful infiltration, with an erysipelas-like redness of the skin did appear; but this was quickly brought to an end by means of compresses wet with alcohol. [Lundvall declares that the 20 percent nuclein solution, containing also quassine and sodium cinnamate, is not painful.—Ed.]

The Reaction to the Nuclein Injections

The desired reactions—namely, increase temperature and hyperleukocytosis—were promptly obtained in every instance. The average maximum temperature was 38° to 39° C.; but sometimes the temperature went as high as 40° or 41° C., and then was accompanied by chills, nausea, and vomiting. This increase appeared as early as six or eight hours after the injection, and then during the next two or three days it gradually receded to normal.

In patients whose temperature was subnormal, the reaction was interesting, in that the injections were followed by a temporary average increase to normal. In a few cases no temperature rise occurred, even when the doses were rapidly increased; instead, a temporary marked increase of the pulse rate was observed.

Hyperleukocytosis could always be demonstrated, even in those whose temperature failed to rise. The average increase of leukocytes amounted to from 8000 to 20,000. The hyperleukocytosis generally lasted longer than the fever. In the few patients in whom hyperleukocytosis already existed, a corresponding increase of leukocytes in the blood followed the injection.

Precautions Necessary in Treating Paretics

Disagreeable after-effects were seldom observed with the nuclein "cure." A few patients who had received a large number of injections complained for a long while of a drawing and irritating where the injections had been made. This pain was partly due to an abnormal development of the skin about, but which usually disappeared by slow absorption.

In treating psychoses, considerable caution was necessary, owing to the possibility of physical complications. Quiescent tubercles often were seen to flare up. In one patient, the course of the disease was thereby influenced in an unfavorable way. In every instance where the heart was not perfectly sound (myocarditis, coronary sclerosis, aortic aneurism in tabetics and paretics), threatening cardiac signs appeared, such as irregularity, weakness of the pulse, and a marked increase of pulse frequency that did not correspond to the increase of temperature.

By careful selection of the cases and giving prophylactic stimulants, these disagreeable effects later usually were avoided.

In spite of all the care exercised, two of the paretics succumbed quickly after the first nuclein injection. In the first one, profuse diarrhea appeared. In the other patient, the fever caused by the second injection did not, for some inexplicable reason, recede, while, after some time diarrhea also set in. These profuse diarrheas, which could not be checked by any therapeutic means, brought about the end. The impression has been gained, though, that this was not because of any incidental complications, but, rather, that the nuclein injection was harmful and favored the fatal result. Perhaps there was an idiosyncrasy to sodium nucleinate. Kraepelin, as early as 1912, called attention to the existence of such a condition.

One other patient, who had Huntington's chorea, and received the nuclein treatment, also reacted unfavorably to the injections. This patient complained of persistent and violent headache, digestive disturbance, and nausea; his weight rapidly decreased, and at last he refused all food, and an unrestrained state of excitement pulled the patient still further down physically than ever before.

Aside from these unfavorable experiences, the nuclein produced, with a careful choice of the cases and marked individualized treatment, nothing but good results physically.

Paretics Generally Improved

After appropriately regulating the dietary, the general condition of the patients treated was almost always improved; but that this improvement was due to the nuclein treatment was evident in many cases without further proof. The nuclein, in these subjects, proved an excellent tonic: often after the first course of injections the strength of previously decidedly decrepit patients increased rapidly, their appetite improved, digestion more regular, assimilation of food became better, sleep more restful and of longer duration. In this way the loss of weight was checked, and in some cases even a permanent increase in weight was obtained.

without any pathologic accumulation of fat masses, particularly in paretics.

This general and prolonged tonic effect consequent upon the nuclein treatment left no doubt in our minds as to this drug's great value, in view of the possibility of its applicability in psychoses for its quieting effect and its ease of utilization; for, by improving the patient's general condition and vitality, the ground would be laid for subsequent periods of intermittent arrest of the disease. The author is also convinced that the very striking tolerance for the preliminary, and often very severe, mercury treatment—so contrary to previous experiences in paretics—must be ascribed to the influence of the nuclein.

This increased tolerance for mercury after nuclein treatment was strikingly demonstrated particularly in the case of one of our paretics, in which there was a faint suspicion of brain lues. This patient was first treated with mercury without simultaneously receiving nuclein, and although every care was used there followed a rapid physical breakdown, eventuating in a violent paralytic state of excitement. Then he was subjected to a preparatory course with nuclein, in consequence of which he recovered physically; and now this same patient bore a very energetic course of antiluetic treatment remarkably well. At the same time improvement of his psychic condition also occurred.

The tonic effect of the nuclein injections was greatest when a 2-percent solution was used, while a 10-percent solution often failed to give the same result. The author believes that this must be attributed to the larger amount of fluid (that is, physiologic salt solution) introduced when the weaker solution is used.

In the few cases of dementia præcox in which thyreoidin also was administered, no considerable disturbances were observed when directions were followed—that is to say, when the thyroid medication was begun only after stimulation with nuclein.

Nuclein Treatment of Progressive General Paralysis

The author, himself, has treated 36 paretic dements, of whom 9 were in a highly advanced stage. In 3 of the latter, the nuclein injections must be considered to have had a directly harmful effect, while the rest did not react at all. Altogether 27 relatively recent cases of general paralysis were treated, of which 14 (that is, 51.86 percent) were not influenced at all; while the other 13 (that is, 48.15 percent) were very much improved, and all of these could be discharged. However, the tonic action of the nuclein is quite remarkable; for improvement in the patient's general condition never failed to appear, even in very advanced cases and when no specific psychic improvement could be observed.

Many times the marked sedative effect of the nuclein injections appeared very early, and often greatly excited paretics quickly fell into a long-lasting deep sleep after receiving an injection. Distinct sedative effects also were obtained in the control-experiments with ordinary physiologic salt solution (with or without adrenalin); the symptomatic results from the nuclein injections, though, in every respect were more lasting, since the temporary sedative effect practically always was followed by a prolonged quieting effect. The condition of great excitement and confusion decreased, and the patient became more sociable and more orderly in his behavior. Orientation returned, the sense of place and locality being first; and the disposition became more uniform and more like normal. A certain euphoria remained and it was surprising to see how the memory, which had been lost, was being regained. Never, however, did the symptoms disappear completely, no matter how marked the temporary improvement might be. Complete restoration of mentality never resulted.

The periods of improvement following this treatment were usually very pronounced and occurred more frequently than in the untreated victims. Strictly speaking, it cannot be said, however, that all the periods of temporary improvement observed were results of the nuclein treatment nevertheless, it may be claimed positively that these spells of improvement were more frequent and more pronounced than they were anterior to the treatment.

Danger of Discharge During Remission

One unsatisfactory feature is that when the patients were discharged during a period of remission (improvement) it was found that not once were the results lasting. Out of the 11 patients mentioned above, 6 came back after an interval of several months, owing to a more or less violent recrudescence of their symptoms. Still, by means of a renewed nuclein course, the acute aggravation of the disease was overcome in all of them, while also a certain quieting effect was obtained. Nevertheless, the progressive deterioration was not arrested.

In the case of totally demented patients, the author hardly expected the nuclein treatment to improve this condition, but he found that it even did more harm than good. In such patients, the best course proved to be to follow the principle of *quieta, non movere.*

Nuclein Treatment in Dementia Præcox

Looking over the literature on the treatment of dementia præcox with nuclein, we see that Lepin has treated 12 cases, of which 3 were slightly improved, and 9 absolutely uninfluenced. Itten had 9 cases, without obtaining any results. Lundvall treated 18 cases with 20-percent sodium-nucleinate solution, to which were added arsenous acid and hetol; 4 of these were cured, 9 were much improved, 2 slightly improved, and 3 uncured. Donath reports 14 cases; 3 were cured, 5 were improved, 3 became worse after temporary remission had taken place, 3 uncured. Donath thinks that the unsuccessful results obtained by Itten were due to the fact that he used, all told, only about 5.8 Grams of nuclein, while his own patients received on an average 14.8 Grams.

The author himself has treated 20 cases of dementia præcox of different types and duration, and of the 20 cases 10 (i. e., 50 percent) remained uninfluenced. However, these were all very advanced, the patients being already considerably demented and prognostically without any prospects.

Two of these 10 patients showed temporary slight improvement; a continuous stupor, which had lasted for months, disappeared quite suddenly after the second nuclein injection, which however did not last. Both patients are now in a very advanced state of dementia.

In 2 of the remaining 10 cases, the treatment has not yet been completed; still, any considerable influence upon their psychic condition has not as yet been observed. Both cases are advanced. As a curiosity, it may be mentioned that one of these patients, after being a catatonic, positively having refused everything for more than a year, now takes food willingly and abundantly. In the third case, the treatment had to be discontinued for special reasons.

The remaining 7 cases (that is, 35 percent) were decidedly improved, all having long intervals of remission. In fact, 4 of these were in such a condition that they were dismissed, as being able to work. In the remaining 3 cases, the improvement was less decided. One of the patients, whose conduct gave very little hope of improvement when he left the institute, recovered later in a surprising way. He was reported perfectly healthy by another physician, and showed any excitement only when under the effects of alcoholic excess.

Nuclein Treatment of Manic-Depressive Insanity

In regard to the treatment of manic-depressive insanity, Lepin is the only investigator who has reported on the nuclein treatment in psychoses. He treated 13 patients. Of these, 8 were cured, 2 much improved, 7 slightly improved, 2 uninfluenced. Lepin concluded that the old dogma of psychiatry, to the effect that the course of a manic-depressive attack can not be influenced at all, does not hold, after once it had been shown that precisely the melancholic condition was shortened and favorably influenced by his treatment.

The author has used the nuclein treatment in 6 such patients. 3 of them distinctly periodic, 2 melancholic, and 1 with chronic mania. In one case of melancholia, the treatment had only a temporary favorable effect; in the second, no result was obtained. One victim of periodic psychosis was improved and could be dismissed before the end of the full treatment. In the second periodic case, only a temporary effect was obtained. The third received 9.8 Grams of sodium nucleinate, but without showing any favorable result whatever. However, the patient recovered after a long period. The sixth patient was a confirmed maniac. The nuclein did not produce any lasting result, although a certain temporary sedative socializing effect was observed.

Conclusions

1. Sodium nucleinate is entirely harmless when the cases are carefully chosen. It is a very reliable remedy for the artificial induction of the febrile state and of hyperleukocytosis. The desired reaction appears with certainty in a surprising majority of the cases. The individual psychosis groups show no difference in their mode of reaction. The preference for the nuclein treatment lies in the stimulative and marked tonic action of the remedy. The tonic effect to be obtained with nuclein seems to lay the foundation for the subsequent periods of intermission.

In connection with the nuclein treatment, the following adjuvant therapeutic measures are urgently recommended: Individualizing regulation of the diet, open-air regimen, careful dosimetric therapy. Because the effects

of the nuclein are solely preparatory, no lasting results or absolute cure can be obtained, even if the treatment be carried out ever so intensively. Perhaps, though, such results might be obtained by the combined treatment with nuclein and other remedies. The combinations thus far tried have not given definite results.

In progressive general paralysis, the very intensive antiluetic treatment made possible by the nuclein stimulation has not fulfilled expectations.

In dementia præcox, the administration of thyreoidin in connection with the nuclein "cure" seems to present better prospects. At all events, further experiments in this direction are very desirable.

2. The increase of the prospects of intermittent improvement in the paralyses treated by way of preparation with nuclein are striking, as compared with the spontaneous remissions. The improvement obtained with nuclein is, in general, greater, although not different than that occurring spontaneously. Likewise, artificially produced improvement is not a cure of the paresis itself; rather it indicates (as it also does in spontaneous remissions) an overcoming of the acute exacerbation and of the aggravation in the course of the paresis. (Baillarger, Wernicke, Alzheimar, Schroeder.)

A restitution to normal, that is, an absolute cure, does not occur. In most favorable cases, a *status quo ante*, or, the condition which existed before the appearance of the acute attack, is reached. The effect of nuclein is symptomatic. A cure of general paralysis with nuclein is completely excluded.

The advantage of the nuclein treatment is that the average term of life of paretics may be prolonged by the increase of the power of temporary improvements—the length of this latter period, the consequent diminishment of the rapidly progressive tendency of the disease, and the removal of the great danger of acute exacerbations.

3. To answer the question, whether the favorable results obtained in dementia præcox, as above reported, are ascribable exclusively to the nuclein is just as difficult, if not more so, than in the case of progressive general paralysis. Dementia præcox is also inclined, in a higher degree than general paralysis, to spontaneous intermissions. The prognosis is very uncertain, and it can in no case be anticipated with certainty that a remission will occur.

Whether the remissions observed have been artificial or spontaneous, consequently is uncertain One could not, however, help but get the impression that the nuclein treatment must have been of some advantage in some of the dementia-præcox cases. These, though, refer only to relatively recent cases of the disease; particularly in hebephrenia, in one patient who had reached a good state of remission, the nuclein treatment, combined with a course of thyreoidin treatment, seemed to have a very favorable effect. The treatment was of no advantage in advanced dementia præcox cases, even when prosecuted vigorously.

The possibility is not excluded that through this treatment an increase of the power to improve could be obtained in dementia præcox, as it has been in paresis. If this be the case, and if it can be proven by further experiments, then we have in nuclein an important remedy that should not be underestimated, because—as experience has shown —periods of temporary mental improvement in dementia præcox often lead to a cessation of the disease and a cure of the disease.

4. The author has had too few cases of manic-depressive insanity to arrive at any definite conclusion. The treatment of these few cases with nuclein did not give satisfactory results. He has ceased to use it for this purpose.

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[The preceding article, we believe, will be of peculiar interest to every person interested in the treatment of insanity, especially since the appearance of Dr. Bayard Holmes's paper in the May number of CLINICAL MEDICINE, in which Lundvall's method of treating dementia præcox with nuclein was so clearly and entertainingly presented. Hauber's article, the English version of which herewith is presented, assuredly is an important contribution to nuclein therapy, and, if taken in conjunction with the contributions of Lundvall and other European psychiatrists, it clearly shows that in nuclein we have a remedy of exceeding importance.

While of course it is too much to expect that this new mode of attack should prove curative in paresis—a disease which is usually considered beyond hope of successful treatment—the fact that at least a certain improvement follows the employment of this remedy lends credence to the hope that some time it may be possible to master it, providing individuals so afflicted can be seen sufficiently early.

In the case of dementia præcox, the evidence is accumulating that brilliant results are obtainable with nuclein. Dr. Bayard

Holmes, who has used it more than anyone else in this country, is an enthusiast concerning its possibilities; while we ourselves are convinced that when once physicians know how to handle the drug, and know how to handle their cases, a very considerable percentage of these unfortunate young people may actually be cured.

Personally, we are of the opinion that a wellbuiltup solution of nuclein, similar in composition to that employed by Lundvall, will assure better results both in dementia præcox and in paresis of the insane than will an extemporized normal-salt solution like that employed by Donath. The Lundvall solution contains other substances stimulating leukocytosis besides the nuclein; the quassin, for instance—as Doctor Lundvall has informed us in a personal letter—being added for that purpose. So, also, the sodium cinnimate stimulates leukocytosis, although Lundvall has recently informed us that he is now discontinuing this substance and substituting for it arsenous acid; which latter is powerfully tonic and thus adds to the reconstructive power of the other ingredients of the formula.

We venture to hope that among those who may read this article by Hauber there may be some who will feel inclined to try out this method of treatment thoroughly: making a scientific study of the blood-picture in all cases, verifying the diagnosis by the Abderhalden and other appropriate tests, and keeping a close watch upon the diet, exercise, exposure to sun, condition of the alimentary canal, and the various other factors necessarily playing an important part in contributing to improvement and eventual recovery. It is with the expectation that the publication of these articles may stimulate investigations along this line in America that we have submitted them to the readers of our journal.—ED.]

The Diarrheal Diseases of Infancy and Childhood

How to Treat Them Successfully

By GEO. H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—Did you read the first installment of this interesting article, published in our June number. If not, look it up. You will enjoy it. In this issue Doctor Candler gives the real "meat of the coconut." He tells us how to go about it to treat these cases successfully. His paper is as timely as it is interesting and practical.

[Continued from page 489.]

IT SHOULD be remembered that many children are prone to suffer more or less from "looseness of the bowels" during the hot months; still, if given reasonable care these little ones will go along from spring to winter without experiencing any serious disturbance of the alimentary tract. The parents must be cautioned to ward against sudden chilling of the child's abdomen and warned that it is extremely dangerous to allow iced drinks, ice-cream, and the like, in large amounts when the child is overheated; indeed, fully a third of my cases of enteric trouble are due to overindulgence in iced beverages, or else to overripe fruit or partly decaying food. As for drink, cool milk with vichy or seltzer is one of the safest of summer beverages; dilute grape-juice may be given to children more than two years old, provided that it be not ingested within an hour after milk was had.

A thin flannel band should be worn around the abdomen by children who show a tendency to diarrhea. When the "fruit season" arrives, a certain increase in the number of stools is to be expected, and as long as these do not exceed two a day, do not contain undigested material or present evidence of fermentation, interference is not called for. On the other hand, the parents should be instructed to make report at the very first sign of colicky pain or frequent passage of thin watery, pasty or stinking gaseous stools.

Furthermore, it may be well to warn the mother that not infrequently obstinate constipation ushers in a gastroenteritis. The child misses its daily movement, complains of vague distress in the abdominal region, and loses desire for food, or, sometimes, craves unnatural articles of diet, while the abdomen becomes swollen. Only by means of enemata can a stool be forced, this usually

consisting of a light, almost clay-colored mass or "balls," in some cases a vast amount of gas being expelled with the feces or after them. Usually about the second day the tongue becomes heavily coated and the little one complains of thirst. The temperature may rise to 100° F. Within the next forty-eight hours, diarrheal discharges make their appearance and the condition may prove quite intractible. I may add that I have never seen these symptoms described in textbooks dealing with diseases of children, although they are not at all uncommon in this part of the world.

Treatment of Simple Diarrhea

The treatment for this condition is simple and effective. First of all, withhold solid food for forty-eight hours. Wash out the lower bowel with water containing glycerin or with warm soap-suds. Internally, give one ounce of castor-oil, or, rather—if you value the affection of your little patients—that amount of some one of the sweetened and flavored preparations of the oil now procurable. I have used laxol with great satisfaction. Then, every two or three hours administer papain, 1 grain, and diastase, 1 grain, preferably with an ounce of a weak solution of dilute hydrochloric acid (10 drops to 8 ounces of water). Three times daily have the child chew three galactenzyme (Bulgarian bacillus) tablets and, after the noon and night meal of bouillon, thin gruel or barley-water and milk, give phenolphthalein, 1-2 grain, and calomel, 1-6 grain, with aromatics. As soon as the appetite returns and the stools are free from offensive odor, return to the ordinary diet, but continue the bacillus-bulgaricus tablets for a few days; if digestion is imperfect, the digestive ferments should be administered after meals.

This same treatment, of course modified somewhat to meet individual conditions, applies in most cases of gastroenteritis in older children, seen early.

I cannot refrain from again pointing out the advisability of impressing upon mothers the necessity of reporting the *very first sign* of enteric trouble. This particularly applies to infants and children entering upon their second summer. Quite often the doctor is called twenty-four or even forty-eight hours after an acute gastroenteritis has set in, only to experience the mortification of seeing his little patient succumb to cerebral congestion, toxemia or exhaustion after the diarrhea has been checked and the other distinctive features of the disease eliminated.

If early and rational treatment is called for more urgently in one disease than another, it certainly is in acute gastroenteritis. Two forms of the disorder are recognizable, the one mild, the other severe in character.

In the mild form of the trouble, the child (who may be teething) shows signs of malassimilation: food passes through the bowel imperfectly digested, accompanied by much gas; also attacks of vomiting occur. After a day or two, the vomiting and the stools become more frequent, the latter carrying either a greenish-brown slime or consisting of a greenish or dirty-gray fluid. Still later, there may be mucus streaked with blood, and the odor of these discharges is most offensive. All along, the child is fretful and complains of cramping pains, or, if too young to speak, draws its legs up and screams. The skin is hot and usually dry, while in the milder cases the temperature will rise about one to two degrees. Occasionally vomiting is absent; in others, diarrhea does not appear for some hours after the vomiting and other evidences of gastrointestinal inflammation.

In the severe forms, all these conditions are accentuated. The temperature may reach 103° F., and as many as fifteen or twenty stools may be voided in the twenty-four hours. I have noticed that such cases usually begin with obstinate vomiting and the passage of one or two stools containing much indigested food. The vomitus at first contains sour food-material and later consists of a foul fluid containing mucus and bile; but, since the child is extremely thirsty and craves for water, this abundance of fluid can easily be accounted for, of course.

This disease affects alike the infant on the breast or bottle-fed infant and the child getting mixed diet. While improper feeding without doubt is the usual cause, heat and bacterial invasion of an exhausted system are solely responsible in many instances.

The disease must be looked upon as mildly infectious, and, so, the stools and vomited matter should be carefully disinfected. The affected child may gradually waste and become almost a skeleton, but, also, the disorder may abate after a few days and recovery ensue rapidly. In very marked cases, death may occur within forty-eight hours. Sometimes two or more such attacks will occur in the one season; also not at all infrequently enterocolitis follows.

The Treatment of Gastroenteritis

Knowing, as we do, that the whole chain of symptoms is due to the presence, in the ali-

mentary tract, of undesirable material and bacteria, and that no gross pathological lesions exist, treatment really is simple; still, to be effective, it must be of a positive character.

As in cholera nostras, we have to get rid, as fast as we can, of the fermenting, germ-breeding, toxic bowel contents. Further, being aware of the presence in the rugæ of the intestine of millions of pathological micro-organisms, we must not put into the alimentary tract material favoring germ propagation. We must also administer in effective doses intestinal antiseptics of an astringent character.

The very first step is, to stop all food, and to wash out the lower bowel either with a plain cool saline or some mildly alkaline antiseptic solution. If the vomiting is marked, pass a catheter into the stomach and wash it out. However, since this is not always feasible, then, as a substitute, give a mild slightly acidulated solution of magnesium sulphate, sweetened with saccharin. It is well to give 1-10 to 1-6 grain of calomel and 1-12 to 1-6 grain of podophyllin half-hourly for four to six doses, according to the age of the child, in order to secure a thorough emptying of the intestine and increased hepatic activity. This is the "first thought." One dose of the foregoing should be given before anything else is done, and the physician himself (unless a competent attendant is present) should then administer the enema. One hour after the last dose of calomel, give a fairly full draught of saline laxative. This serves to flush the already cleaning intestine and leaves the mucosa in good condition to withstand bacteria and to absorb such nutritive material as is allowed.

During this time, if the skin is hot and dry, have the child sponged hourly and covered lightly with a thin flannel garment. It is to be kept in a cool, shady place. Barley-water, made thin, will prove the best drink at this period. The Bulgarian-bacillus tablet (galactenzyme) may well be given with each draught. Every two hours at least 1 grain of the combined sulphocarbolates of calcium, sodium ,and zinc should be administered—preferably in solution. A mentholated saccharinated tablets is obtainable, which serves excellently. In bottle-fed infants, this solution may be given from the bottle, as also may the laxative saline draughts. In older children, the powder mixed with a little sugar of milk may be given on the tongue and a drink of boiled (or barley-) water follow. Very minute doses of atropine (or hyoscyamine) are of great service during the first day; 1-250 grain being dissolved in six teaspoonfuls of water and of this a teaspoonful given every two hours.

If this treatment is carried out, the next day will reveal a recovering patient. But here care means everything. The sulphocarbolates must be continued, the lower bowel flushed, the mouth kept clean. Albumen-water, barley-water containing a few drops of fresh beef-juice, or a few spoonfuls of a well-cooked cereal gruel may be given. Zwieback is safe and well liked by most children. Under ordinary circumstances, this diet may be slowly but surely added to, until normal feeding again prevails. Brucine, 1-128 grain, or hydrastoid, 1-6 grain, may be given as a bitter tonic for a few days. It is also a good plan to undertake on about the fourth day another course of calomel and podophyllin; or, in place of the latter, irisoid, 1-6 grain, may be given hourly for four doses. If the stools are markedly offensive and clay-colored, add bilein, 1-12 grain, to every other dose. The effect is immediately noticeable.

When There Is Hyperacidity

Occasionally hyperacidity will be marked. Here, a few doses of calomel (gr. 1-6) and soda (gr. 1) act satisfactorily. Should the condition persist, a few doses of neutral cordial (sodium carbonate, gr. 1; sodium sulphocarbolate, gr. 1; emetine hydrochloride, gr. 1-1000; hydrastine hydrochloride, gr. 1-32; berberine hydrochloride, gr. 1-32; rheoid, gr. 1-6; aromatics, q. s.) will prove promptly corrective.

It should not be forgotten that in all these cases more or less local congestion exists, and that for this atropine is one of our best remedies, bringing, as it does, the blood to the surface. Moreover, this drug stops the excessive secretion of mucus—another desirable feature. It is always well to give fairly full doses of atropine at once when the skin is cold and pale; cactoid and brucine (each, gr. 1-64) will, perhaps, prove the best subsequent stimulants.

If the disease has progressed and weakness is marked, nuclein is strongly indicated; 6 or 8 drops should be given under the tongue thrice daily. It is in these cases, too, that rectal injections of beef-juice and starch-water prove so valuable.

In those cases where the system has been deprived of large amounts of serum, enteroclysis is imperative, and here decinormal salt solution, with 2 drams of prepared blood to the pint, proves especially very valuable.

It is well in all well-marked cases to give thin, clear beef- or chicken-bouillon for the first day or two after normal conditions are restored, returning to milk very gradually.

Acute Enterocolitis

This disease is especially troublesome during the late summer months and requires careful and somewhat prolonged treatment.

Shiga's bacillus unquestionably is the prevailing microorganism and the colon the seat of marked deteriorative changes. Hence, the necessity for continuous medication, varied from time to time to "suit the conditions present."

Not at all infrequently, enterocolitis (dysentery) follows upon the heels of gastroenteritis, and sometimes the doctor is not called till this condition has become established. Children from one year of age to seven are subject to ileocolitis; the older the child, the more likely is it that the disorder will prove secondary.

As a primary infection, enterocolitis is not common among reasonably well-fed children. The early symptoms are likely to be confounded with those of acute indigestion (which see). The two conditions may coexist.

There is more or less pain and swelling of the abdomen; the child vomits perhaps and has several stools daily, preceded by "gripes." The dejecta at first are greenish or yellowish-brown and carry streaks or are followed by mucus and blood. Later there is more mucus than fecal matter and blood may be plentiful. The seat of infection invariably is the colon, but one or more feet of the ileum (above the ileocecal valve) may also suffer. Occasionally the enlarged follicles of the large bowel ulcerate and pus occurs in the stools. We have then a serious condition to combat.

Under ordinary circumstances, if diet be restricted, the little patient begins to mend in from seven to ten days, and slowly the stools resume a normal appearance.

On the other hand, each day may see the condition grow worse: the temperature rises (absorption of toxins), tenesmus is marked, and after much pain small mucous and bloody dejecta occur. These may be frequent, even hourly. Anorexia is extreme, prostration marked, and the child assumes a skeleton-like aspect. In such cases, the urine is greatly diminished and is likely to contain casts and albumin. It is not hard to realize that the organic changes here are profound and recovery is far from probable. Indeed, once such serious conditions obtain, we can expect, even should we be able to control the disease-process, that the child will require close attention for months. In unfavorable cases, death occurs, as a rule, within a month.

Early Treatment Important

Here again early treatment means everything. Modern methods instituted within the first two or three days almost invariably prove effective, but great care should be taken as to the diet for the rest of the year.

As for treatment: High enemata of normal salt solution (or better, still, a calendulated solution of the sulphocarbolates) are essential. For some years I have been utilizing a preparation of calendula officinalis, resorcin, and bismuth, known as calenduline, and in every case results have been ideal. Twice daily the intestinal tube is passed (for the technic, see "Treatment of Acute Gastroenteritis"), and 3 pints of decinormal salt solution or a 1 : 500 solution of the sulphocarbolates, to which 2 ounces of calenduline is added, thrown well up into the colon. After each stool 2 drams of a mixture of 1 dram of aqueous extract of hamamelis virginica and 1 ounce of water should be thrown into the rectum, pressure being made over the anus with a wad of gauze. This alone usually prevents tenesmus, which is very troublesome while the lower bowel is most affected.

Here again extended experience has proved the necessity for cleaning out the alimentary tract with small doses of calomel or else blue mass and soda, followed by a saline purgative draught. As a first step, therefore, order calomel, gr. 1-6, and either irisoid, gr. 1-6, or podophyllin, gr. 1-12, every hour for four doses, and, one hour after the last dose, give a full teaspoonful of effervescent magnesium sulphate. Repeat in forty-eight hours. Give, also, every three hours, hydrastoid, gr. 1-6, hamameloid, gr. 1-6, and one or two teaspoonfuls of a solution of the sulphocarbolates—10 grains to the ounce. Juglandoid, gr. 1-6, occasionally proves more desirable than either irisoid or podophyllotoxin, the indication being marked relaxation and thin mucous stools. Brucine or strychnine will suggest themselves where the disease has progressed debility and is pronounced. In all cases, they will be indicated as alterative tonics during convalescence. Nuclein should be added.

The diet must be light, nutritious, and free from waste. Gelatin, corn-starch, clear soups, albumen-water, jellies, beef-juice, clam-bouillon, and so forth, will afford variety during the acute stage. Arrowroot is desirable, as are also ground lentils.

Nothing known to me equals a gruel made of boiled flour. Tie 2 pounds of dry flour tightly in a piece of linen and boil in plenty of water for five hours. Hang up the bag to dry; remove the linen and split the doughy paste covering the dry flour. Grate fine, as needed, and prepare a gruel in the usual way. This proves an ideal food in all gastrointestinal derangements, and marasmic infants often grow fat on it.

Glonoin and cactoid will prove more efficient stimulants than brandy or whisky, which usually do more harm than good. Atropine or hyoscyamine will, in every case, produce prompt reaction and stop vomiting within two hours. The "calmative" formula already mentioned is ideal here.

Sugar and starchy foods should be given with caution for some time after the bowel has resumed normal conditions; also, it is well to flush the intestines every third day for at least a month. In old-standing cases, it may be necessary to sustain life with small quantities of prepared blood preparations sanguiferrin, bovinine, liquid peptonoids) (predigested cereal gruels, albuminous preparations, barley-water, clam-broth, and zwieback. The latter often will be digested when everything else causes trouble. Massage over the abdomen is of great benefit in all enteric troubles. It should be done with the hand moistened with olive-oil.

In older children, where appetite leaves early and refuses to return, even after everything else seems normal, quassin, gr. 1-3, and nux vomica and capsicum, half a tablet, an hour prior to meals, rarely fails to produce desired results.

Some Medical Experiences

And What I Learned from Them

By J. M. FRENCH, M. D., Milford, Massachusetts

MY FIRST medical experience came to me at an early age. To be sure, it was not medical in the sense of giving medicine, or even advice. I simply refused a call.

Reuben Scribner, a neighbor of ours, who lived, as I remember it, in a little red house out in the field, came to see me one day, and told me that he had been a sufferer for many years from a "fever-sore" on his leg. Having learned that I was a seventh son, and being a man of faith withal, he had come to ask me, as a favor to him, to go to his house and stay there over night, in order that I might be able to come to his aid in the morning, before sunrise, by laying my wonder-working hands on the diseased portion of his anatomy and pronounce him cured. This was the sober proposition of a full-grown man to a little child. It was a great opportunity, although I did not then recognize it.

As I look back upon that episode today, I realize what a grand field of usefulness there was opened up to me! Had I but entered upon and cultivated it, I need not now be making calls at a dollar and a half a call, and thinking myself lucky to get the dollar, let alone the half. The world was open wide before me, inviting me to enter in. It was the call of Opportunity, which, they say, knocks once at least at every man's door. Had I heeded, I might have become a shining light in the great host of Seventh Sons, Sleeping Lucys, Indian Doctors, Hypnotists, Faith-Curers, *et id omne genus*. Fortunately or unfortunately for me, however, I had inherited from the parents whose seventh son I am a strong dislike for that sort of a thing; so I simply declined the call and left my neighbor to live, and suffer, and die, unaided and unsuccored by any alleged mystic powers of mine.

I learned from this experience a lesson concerning the credulity of human nature.

In my school days, I helped take care of a man who was suffering from an unusual form of spinal disease, and who required—or at least received—two quarts of whisky a day to keep him comfortable. Aside from this, the only thing that seemed to relieve his frequent attacks of severe pain was, to have a hard-fisted, horny-handed son of toil thump his spine until the thumper's knuckles were sore, and the patient's back ought to have been but was not. Then a second man would take the place of the first, and the circus would go on.

This man's early death was confidently predicted, and, so, the good lady with whom he lived ordered a coffin for him, had it brought to the house, and stored it in a place convenient for immediate use. But, alack and alas! The fellow confounded the prophets of evil, miraculously got well, and lived for years afterward. Whether it was the thump-

ing that cured him or the whisky, I cannot say neither do I know what ever became of his coffin.

I learned from this experience that it takes a great deal to kill some people.

"The Wilderness of Pills and Powders"

It was during the time I was helping to care for the foregoing man that I read a book written by Dr. William A. Alcott, entitled "Forty Years in the Wilderness of Pills and Powders; or, the Cogitations and Confessions of an Aged Physician." It was a wonderful book—at least it seemed so to me—and did as much as anything (unless it was the talk about the "seventh son") to lead my mind to the study of medicine; although, to be sure, Dr. Alcott was somewhat of a skeptic as to the use of drugs, his stronghold being the idea of removing the morbific cause.

Twenty years later, I came across a copy of this book in a second-hand bookstore in Boston and brought it home with me. I kept it on my shelves, until one day some kind friend borrowed it—borrowed, then carefully forgot to return it. After a while, I hunted all over the house for this book, having entirely forgotten about lending it to someone. I made inquiries among my friends, but none of them knew anything about it, until finally I gave it up for lost. But one fine summer morning, when I was mowing my lawn, a neighbor came down the street with that book in his hands, to give to me: he had just had his annual clearing-out and come across that book with my name in it.

I learned from this experience that men are careless about books they have borrowed.

Curiosity is a Strong Trait

I studied medicine under Dr. Robert L. Flagg, of Jeffersonville, Vermont. He was a jolly, companionable sort of man, who knew how to make himself at home with his patients and at ease in the sick-room. The ability to do these things myself were among the most important that I learned from him. In fact, what I learned from Dr. Flagg was mostly incidental; still, none the less valuable. He loved dearly to have me ride with him, being of the class of men who always seek companionship.

One day we drove up to Belvidere, to make some calls. Now Belvidere is the "jumping-off place." To get there, we had to go some miles up the Lamoille River in the town of Cambridge, then turn off through the village of Waterville (a little hamlet that has turned out more able men than any other of its size that I know of in Vermont), and thence on into the wilderness, where lies Belvidere. Just where we left the broad level meadows of the Lamoille Valley and turned into Waterville, there lived an old Yankee farmer named Jack Page. He was filled with rheumatism and consuming curiosity. So, when he saw us go by in the morning, he felt that life was hardly worth living for him until he should have a chance to satisfy his curiosity concerning the invalids of Belvidere; and all day long he kept his eye upon the road above him, that he might not miss us on our return trip.

Late in the afternoon we rounded the corner, homeward bound. The old man was all ready for the occasion and started out as he saw us coming, leaning heavily on his cane. As we came up to him, he halted us, standing with one hand still leaning on his cane and the other raised in the act of beckoning to us. As we drew up, he asked, with eager interest, "Doctor, who's sick up this way?"

I learned from this experience, and from many others like it since then, that men, no less than women, are "curious critters."

A Peculiar Form of Gratitude

I began my practice among the hills of northern New Hampshire but staid there only a few years. When I was ready to leave, there was one family whom I had allowed to run up quite a good-sized bill—although it was small enough, indeed, for the services rendered. Professional services were not rated at a very high figure in New Hampshire in those days, however it may be now. The hills the doctor perforce must climb are a good deal higher than the bills he dares to render. But the peculiar thing about this particular bill was, that the head of the family not only paid it in full without grumbling, but actually made me a present of a bag of oats to feed my horse on our way to Connecticut, where I was soon to go.

Such conduct was without parallel in my experience. I never had a grateful patient die and leave me his house or barn or purse. In fact, I have always considered myself fortunate if he left me enough of the contents of his purse to pay for my services at the market rate. So, for a long time I indulged my gratitude to this good man for that bag of oats.

Not until long years afterward it finally dawned upon me that, as I was about to set out for Connecticut the next day with my horse and buggy, not to return, this good man was so anxious that I should not fail to get

safely out of New Hampshire and so fearful lest my horse's strength might give out, that he had donated this bag of oats to help keep up the pony's strength on the journey! And so passed away my dream of gratitude.

I learned from this experience that, when a man gives away oats, he generally knows what he is about.

It was a few weeks before this oats episode that I took my first trip down into the Nutmeg State to look up a new location. I stopped off at a little village one day at noon. The sun was hot and the roads were dusty. There was one long, wide street, stretching along the valley of the Farmington River and bordered by magnificent wide-branching elms on either side. Just back of the central portion of this street, extending north and south for a considerable distance, and on a rise of ground which made it quite conspicuous, was an old, large and well-filled cemetery, bearing witness to the successful lives of many generations of medical men.

I walked the whole length of the street and back, and took it all in, including the cemetery. I asked a few questions—a very few—and told the people I'd come to locate. I did, and never regretted it. I wanted a location, they wanted a doctor. It was the only desirable place I ever found in New England where a new doctor was really wanted. This place was a field and a grove, a garden and a lawn, a thing of beauty and a joy forever. I found there two of the best friends of my life, in the persons of two old men of seventy-five or older. To judge by their actions, neither one was more than sixteen. I really hadn't the heart to stay there and try to outlive them.

A Dishonorable Consultant

When I had been in this new place but a short time, I was called one day to the west part of the town, to see a red-headed Irish domestic and found her suffering from a severe attack of malarial fever, which was just then beginning to become prevalent in Connecticut. Paying another visit two days later, I found no longer any symptoms of malaria, but the chest and arms of the patient were covered with a bright-scarlet rash, with minute vesicles on the arms, and the whole accompanied by considerable fever. There was not at any time any noticeable sore throat.

The affection increased in severity, and two days later I called in consultation a physician from the adjoining town, who had formerly treated this family. He was a prominent member of the Connecticut Medical Society and stood high in his profession; facts which I supposed to vouch for his character and ability.

After this doctor had arrived and I had given him a brief history of the case, he entered the sick-room with the air of one whose foot is on his native heath; he looked sharply at the patient for the short space of a moment; felt of her pulse; took a look at her tongue; looked wise for another moment, and manifested some surprise; then, addressing the sick girl, he asked, "Don't you know what you have got?" His tone and manner plainly said, "Anybody ought to know that!" But, no, naturally enough she did not know what ailed her, since her attending physician had not been able to decide the question. "Well," spoke this prince of consultants, still directing his remarks to the patient, "You have got scarlet-fever."

That settled it. Settled me, too. For, was not I the young doctor? Here was ethics for you. No consultation; no attempt at professional courtesy; no deference, even in appearance, to the attending physician; nothing but a bald, blunt, snap diagnosis—scarlet-fever.

To be sure, kind Providence avenged me on mine anniversary and so made the memory of this unpleasant experience a little less unendurable. Three times within the space of three months this girl had scarlet-fever; that is, she had two recurring attacks of what this doctor had diagnosed as scarlet-fever. But, be it stated, each of these recurrences followed upon the same exciting cause—quinine (or other cinchona alkaloid). Each time quinine was administered by a new physician, it was given for the same disease, namely, malaria.

By the time the malarial disease had finally subsided, it was plain to everybody concerned (excepting to my genial consultant, who, so far as I know, never heard anything more about the case) that we were dealing with one of the rarer cutaneous manifestations of quinine.

I learned from this experience that even consultants sometimes make mistakes; also, that not every physician is a gentleman.

A Young Wife's Attempted Suicide

One day my landlord sent for me to come to his house in hot haste. I went quickly, and found that the old man's young wife had become jealous of him and had swallowed a dose of laudanum in revenge. "It was all a mistake. I ought never to have married you. At least I can die and leave you free." This

was the substance of the pathetic letter which the husband found waiting for him on the sitting-room table when he came into the house unexpectedly in the course of the afternoon.

The poor man, who but an hour before had come home from the nearby city with a bouquet in his button-hole which wasn't there when he left home in the morning, took in the situation at a glance and sent for me to help him out. I never told the old man, but I always thought it was a shrewd move on the part of his charming young wife. She didn't take laudanum enough seriously to endanger her life, and the result was, that peace reigned in that household for some time afterward.

I learned from this experience a lesson in domestic economy.

Nephritis and Heart Failure

Come down a score or so of years. Shift the scene to Milford. Time, an hour past midnight, on the 13th of January, 1898. I was aroused from the sweet sleep of the just, by a clanging call from the night-watchman, to go in urgent haste to the top story of Grant block, to attend Mrs. P., an old and superanuated nurse who lived there all alone. I found the old dame apparently nigh unto death, suffering from a severe attack of dyspnea and failing heart, as the result of chronic parenchymatous nephritis with accompanying cardiac dilatation and valvular disease. She was alone and homeless except for this one room, and practically without any friends. Indeed, she was not calculated to make many friends, inasmuch as she was a testy, fault-finding old lady, very exacting in her demands, and never appreciating the favors which were done for her, but always wanting more. She was without means, except a few hundred dollars—a very few—in the savings-bank. She had a mortal horror of "going on the town," and repeatedly implored me not to abandon her to the tender mercies of the town-physician. Yet, the town-doctor would have done all that I did for her, and perhaps more. Enough that I attended her constantly and faithfully for twenty-one long and weary months, at the end of which time she died.

She was one of those patients who require much at the hands of their physician, while they give but little. I furnished nearly everything in the line of medicine and artificial food which she required, for I found that she did not get them unless I brought them to her. Much of the time she was without a nurse, or even an attendant, except someone who came in to look after her once or twice a day.

Under these circumstances, the task of the doctor was not an easy one. Often I had to go on errands for her, in order that she might not lack for the necessaries of life. Much of the time I had to climb the two long flights of stairs which led from the street to her room, as many as four times a day, and not seldom in the night as well. Once during her illness she managed to get herself involved in a lawsuit, and I had to help her out of that also.

When she was so badly off that it was impossible for her to get along without a nurse, it fell to me to look up the nurse and get her there. This was no easy task under the circumstances. A new one had to be hunted up every few days, as no one wanted to have anything to do with her for long at a time. There was one good woman who shared the burden with me, and proved herself so competent a nurse and general helper that I have often had occasion to employ and recommend her since that time. A sister of the patient, who lived near Boston, came once in a while to see her, but they usually got into a fuss every time she came, so that everybody was glad when she left. No other relatives ever came near.

A few days before her death, her sister came again, and when the poor woman was too far gone to resist got her to transfer to herself, what little money she had left in the bank, to be used in paying up the bills. In due time she died—died, and left no mourners.

After she was dead and gone, the sister cleaned up the room and sold the furniture for what she could get. At this time she came to me and asked me for my bill, saying that her son, who was a well-to-do business man, had told her to do so, and that he would send me a check when things were settlde up.

I estimated that at a dollar a visit, not counting the medicines I had furnished, the bill would amount to not less than $540.00. However, I made out a bill for $100 and handed it in. The sister took the money received from the sale of the furniture, also the proceeds of the bankbook, and with it paid "the butcher, the baker, and the candlestick-maker." In other words, she paid the milk-bill, the grocery-bill—there was no drug-bill, for the doctor had furnished the drugs and made no charge—paid every nurse, and, so far as I could learn, paid every bill that was due, save always and only the doctor's bill. That she left for her son to pay.

When she had been gone for several months and I had heard nothing, I sat down and wrote her a letter, reminding her of her promise—and also of several other things. I told her that I was never under any obligation to her sister, except the obligation of common humanity, and that I thought it was proper that the burden of her illness should be borne, at least in part, by her own relatives, rather than that it should fall entirely upon strangers or those who had no interest in her. I suggested that, as she had taken her sister's money to pay the bills with, it was no more than fair that I should have my share with the rest. I reminded her that she had promised to pay me, and requested that she would keep her promise.

After waiting a considerable time, I got the following letter from her son, which I present, *verbatim et literatim*, minus the date and names, as a model of its class.

J. M. French, M.D., Milford, Mass.

Dear Sir:

Yours of the 16th addessed to my mother came duly to hand and in reply say that Mrs. P.——— left nothing except the furniture and household effects the sale of which did not realize enough to pay the necessary bills. Now regarding the bill which you have rendered say that neither my mother nor myself feeled called upon to pay the same, consequently shall not do so. Furthermore I am fully aware that it is customary for physicians in "good standing" to furnish medical advise to nurses without charge. Trusting I have made myself clear in the matter I am

Respectfully, _____

I gained from this experience a very comprehensive but entirely valueless knowledge of the ingratitude of human nature.

Pyuria

By P. T GEYERMAN, M. D., South Dakota

THE presence of pus in the urine frequently is misinterpreted, while its source sometimes is difficult to determine, although we are able to do so virtually in every instance if a proper procedure is followed and sufficient time is devoted to details. Modern appliances and instruments have almost revolutionized the diagnosis and treatment of diseases of the genitourinary organs and have made this field of special work a definite one.

Method of Diagnosis

The cystoscope, urethroscope, and radiography have each contributed their share in making correct diagnoses. The catheterizing cystoscope, especially—which enables us to pass catheters directly from the bladder to the kidney without contamination from the other side or allowing the urine to come in contact with the bladder wall—has enabled us to differentiate definitely between lesions in these organs as well as to treat them properly.

It has been said that the cystoscope has done for these organs what the ophthalmoscope has done for the eye, and a better comparison would be hard to imagine. However, its use must be properly restricted. In general, it might be said that all subjects having a chronic infection should be cystoscoped, especially if the disease has resisted treatment for any length of time. All acute cases, unless there is some good reason for it (such as a suspicion of stone, tumor or kidney infection), are best treated without using the instrument.

The urethroscope is particularly adapted for the examination of the urethra. That portion of the urethra which lies just in front of the bladder and is surrounded by the prostate gland is best examined with a urethroscope having a prostatic curve, this allowing the introduction of the instrument with greater ease and less discomfort to the patient.

Many vague symptoms, both local and reflex, are due to lesions in this region, and particularly so if they involve the colliculus. Normally the colliculus is of a deep-red color and about the size of a split pea. It is really a portion of the prostate gland, and the ejaculatory ducts open out on either side of it.

Where this latter organ is in a state of chronic inflammation or covered with granulations, the patient is likely to be neurasthenic. Many of the subjects complain of general as well as of local symptoms, such as discomfort in the perineum or of suprapubic pain and aching. The general symptoms are those common in neurasthenia or nervous breakdown, and it is quite probable that a majority of neurasthenics have some local lesion in the prostatic urethra. This condition has its etiology either in infection (usually gonorrheal) or repeated congestions in this neighborhood, and pus can be demonstrated in the urine of a considerable proportion of the patients.

Sometimes pus is discovered accidentally in routine examinations, such as for life insurance or for other reasons where a complete examination is made. As a rule, when there

is any considerable pus in the urine, patients have some complaint to make and they seek advice because of the accompanying symptoms. An occasional leukocyte or pus-cell in the urine does not mean that it contains pus sufficient to be pathological. After centrifuging, there must be a considerable number before we are justified in recommending further examination with instruments.

The Examination of Urine

Given a specimen of urine, it is better to use a centrifuge than to allow it to sediment in a glass, since changes will take place in the latter that alter the character of the cellular elements and interfere with a proper examination. Besides, decomposition of the urine also changes its reaction. If we find pus, we are able to determine its source, to a certain extent, from the character of the accompanying cells.

To illustrate: If the irritation is high up, that is, in the kidneys and ureters, the columnar type of cells is predominant; while the cells from the bladder and urethra are of the flat or squamous type. In this way we are sometimes assisted in determining the course of future procedures. The reaction is also of some importance; pus in an acid urine is quite likely to come from the kidneys, as the changes in the bladder, when the latter is involved, render the urine alkaline. However, the kidneys and the bladder may be involved at the same time and then the reaction is of no importance. These are merely aids and are not to be relied upon for definite diagnosis.

Among the more important conditions causing pus to be present in the urine (leaving out acute gonorrhea), we have chronic inflammatory conditions of the urethra, and nearly always gonorrheal. Occasionally we find infections of the urethra due to other organisms, especially the catarrhal form of organisms, as the micrococcus catarrhalis. The latter organism can be distinguished from the gonococcus by staining and culture methods. Mixed infections are, of course, common. These nearly always are subsequent to gonorrhea, but the gonococcus has ceased to be a disturbing factor.

Prostatitis

Acute and chronic prostatitis are frequently met with, especially the chronic form. In these cases, the prostatic urethra is infected, the pus runs backward into the bladder and becomes mixed with the urine. Here the three-glass test is of great value. The procedure is as follows: The patient first urinates into two glasses, leaving a small portion of urine in the bladder. The prostate gland then is massaged and the remaining urine in the bladder is then emptied into the third glass.

The indications are now quite clear. If only the first urine contains pus and shreds, the anterior urethra alone is involved; if the first two glasses contain pus, the posterior urethra also is involved; if all three glasses contain pus, the prostate gland is an accompanying factor in the case. If the third glass is free from pus, the prostate gland is not infected.

Senile Hypertrophy

In senile hypertrophy, we have a retention-cystitis due to the inability of the patient to empty his bladder; completely or, in other words, there is a partial obstruction to the free passage of urine, which is one of the most frequent causes of bladder infection. In such cases, we allow the patient to empty his bladder as nearly as possible and then catheterize and determine the amount of residual urine. If the patient has residual urine, we have a sufficient cause for the pyuria.

It is well to cystoscope the bladder here, to determine whether or not there are complications present such as stone or possibly tumor formations. The cystoscope also gives one a correct idea of the intravesicular portion of the prostate gland.

Cystitis

Excepting in very acute cases, the cystoscope should be used whenever there is cystitis. In fact, this is the only accurate way we have of getting definitely at the cause. In the primary cases, this may not enlighten us very much as to the causation; still, two things are gained by the examination, to wit: First, as to treatment. The local lesions will guide us as to proper medication as well as directing applications to the diseased wall. Second, we have eliminated causes that may be removed, such as stone, tumors, and so on.

In the extremely acute cases, it is best to treat the condition for a time and allow the acute symptoms to subside before inserting the instrument for inspection of the interior of the bladder. In all forms of cystitis not due to hypertrophy of the prostate gland or some other well-determined cause, we are positively in the dark as to the cause, and, if allowed to go on, great harm may be done the bladder. This is too often true of cases

due to stone or tumor. A stone which has been lodged in the bladder for a long time produces changes in the bladder walls that can never be entirely overcome, because of thickening and contraction, while tumors destroy the bladder walls themselves and malignant tumors go beyond help in a short time.

Many of these cases begin with a slight irritation, which gradually becomes worse, until the patient presents himself with severe symptoms; or the symptoms may be of a mild nature for a long time and then suddenly become serious.

The symptoms of the more common affections frequently are misleading; and, again, the classic, or textbook, symptoms generally are wanting in these more common conditions involving the bladder. Indeed, many textbooks are nothing more than copies from those previously written and at a time when accurate diagnosis in genitourinary affections was at a low ebb. This often is true of stone in the bladder, as I have demonstrated a number of times, wherein the symptoms complained of by the patient were not even suspicious of this condition, and but for the cystoscopic examination I might have overlooked the true cause and applied the wrong treatment.

Searching for stone with a sound or a stone-searcher is inaccurate, and, when negative, is of no value; besides, the bladder walls may be injured by this method. The x-ray is of value and can be relied upon when positive, but not always when the plates are negative, as all stones do not throw a shadow. However, it is a valuable adjunct to cystoscopy, especially if we suspect stone in the kidney or ureter. Nephrolithiasis, pyonephrosis, pyelitis, urethritis, hydronephrosis, and neoplasms are all sources of pus in the urine.

It is rather surprising what a great number of infected pelves one finds when looked for. The urine should be collected from both kidneys separately and examined for pus in all cases that do not clear up under treatment directed to the urethra and bladder.

Kidneys

In considering the cause of cystitis, we must not forget the kidneys. Quite often cystitis is due to a descending infection. This we occasionally find following the pyelitis of pregnancy. The kidney becomes infected during pregnancy from interference with drainage, due to pressure in the abdomen. This is most likely to occur near the end of gestation.

The pelvis of the kidney becomes infected first, and, if not relieved, the kidney substance itself will become involved, producing a pyonephrosis. The bladder in such cases becomes infected, and the patient complains mostly because of the bladder symptoms. In fact, the bladder exhibits symptoms before infection of this organ takes place, and, unless great care is taken, the symptoms of the real disease are neglected, and destruction of the kidney goes on until all further function is lost.

If the cause is suspected and the focus of infection treated by means of direct lavage to the diseased pelvis, the outlook is good for cure, providing the obstruction to drainage is removed and the bladder will get well when the pelvic and kidney infection are relieved.

Tuberculosis

Tuberculosis of the kidney is also a frequent source of bladder irritation, and the patient is very likely to complain of frequent urination for some time before the general health becomes notably impaired or any marked changes take place in the urine. To determine a tuberculous infection of the kidney sometimes is difficult, and to determine it early is even more so, although eminently important to the patient.

Separating the urine by means of the urethral catheter and examining for pus and tubercle bacilli are the most efficient means we have. The demonstration of the bacilli is especially difficult, but if carefully and persistently looked for they can be found in fifty to seventy-five percent of the cases. If guinea-pigs are at hand, an inoculation may be made, which, if positive, is very valuable in completing the diagnosis. The early excision of the diseased kidney is the only hope for cure, as a wide-spread infection of the genitourinary tract will eventually take place unless the primary focus is removed.

However, we must remember that tuberculosis of the genitourinary organs is nearly always secondary to a tuberculous focus in some other place. Unless we are sure of an ascending infection from the bladder or urethra, or unless the patient has or has recently had an infection of these organs, we should be very suspicious of tubercle infection of the kidney when we find pus coming down from one side, and it is our duty to use every diagnostic aid available to make a proper diagnosis.

Of course, neoplasms and hydronephrosis should be considered in this class of cases. Hydronephrosis can be determined by measuring the capacity of the kidney pelvis and by

radiographs of the pelvis filled with collargol. Neoplasms usually bleed early, and we may be able to palpate them.

If we are to care for patients who come to us presenting lesions of the genitourinary organs, we must be prepared to use all the available modern scientific methods that have proven of value in the diagnosis and treatment of these organs. We should not allow ourselves to guess, when a means is at hand by which we are able to eliminate this uncertainty. I do not mean that each and every case can be correctly diagnosed. But, unless the physician is prepared and willing to use modern means to this end, I venture to say that the great majority of people having diseases of these organs will not have a correct diagnosis made.

There is no other class of diseases where accuracy is of more importance or, I may be permitted to say, of as much importance. If the proper diagnosis can be made and a corresponding treatment instituted, we are quite likely to be gratified with nice results, and our patient saved from suffering; while the contrary will, quite likely, give results that will be very much regretted by both patient and physician.

An Operation For Parotid Fistula

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Author of "The Diseases of Society," "The Blood of the Fathers," etc.

IN February, 1900, I published in the *International Journal of Surgery;* the report of a case of fistula of Steno's duct operated upon by a method devised by myself. The case, in resumè, was as follows:

Case 1: A young man 26 years of age, under treatment for syphilis, was referred to me for diagnosis and for removal of a tumor in the left parotid region. The tumor was about as large as a pigeon's egg, fluctuating, but firm to the touch, and on aspiration was found to contain an opalescent, somewhat viscid alkaline fluid of the consistency of syrup. The cyst was evidently salivary in origin, although ptyalin was absent, as is likely to be the case in salivary cysts of long duration. The cyst had been in process of formation for three or four years, and was slowly increasing in size. There was no definite history of traumatism, but the patient had an indistinct recollection of a blow received upon the cheek some years before the tumor appeared. Extirpation was advised and consented to.

Operation: There were no features of interest in the operation. The cyst was extirpated cleanly and with no special difficulty. The day after the operation the patient complained of a flow of fluid from the wound that saturated the dressings and ran down upon his face and neck, soiling his clothing. Examination showed a profuse flow of saliva from the wound. Steno's duct had either been wounded, or, what seemed more probable, the cyst had involved a portion of the parotid close to the duct. As was to have been expected, a salivary fistula resulted. This I closed by my method shortly to be described, about six weeks after the primary operation. I have no means of knowing whether my method has been used by others, or, if it has been employed, with what success. My own opportunities for repeating the method have been meager, and I have subsequently had but two cases of a similar character. Both of these, however, were operated upon successfully by my method.

Case 2: A woman thirty years of age consulted me for a parotid fistula on the left side resulting from a stab wound said to have been inflicted accidentally with a pair of scissors, six months previously. The fistula was small, but gave exit to a continuous flow of a considerable quantity of normal saliva. There evidently had been little if any infection following the wound. Operation was followed by complete and permanent closure of the fistula.

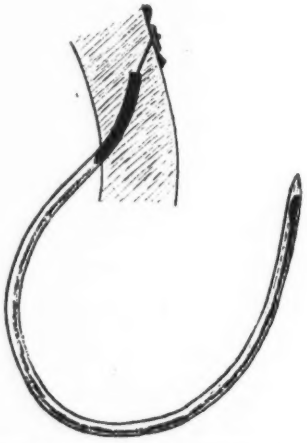
Case 3: A man, forty-five years of age, giving a definite history of syphilis presented himself with a fistula in the right parotid region. This had resulted, it was claimed, from a small abscess which had occurred three months previously. The syphilitic history and the appearance of the cicatrix, however, led me to suspect a gummous syphilide. Mercury had recently been given to the point of tolerance, and the Wassermann test proved negative. One week after an intramuscular dose of salvarsan I closed the fistula, after removing the cicatricial tissue about it. The result was perfect, and at present writing, four weeks after the operation, the fistula remains soundly healed.

The technic which I employed in these cases was as follows:

The edges of the fistula were first freshened; a moderately sharp-pointed, eyed steel probe was then threaded with a heavy silk ligature and passed obliquely downward and inward through the tissues of the cheek into the mouth. The probe was made to traverse as nearly as possible the line of Steno's duct, emerging at its orifice. The probe was drawn out at the mouth, leaving the ligature traversing the tissues of the cheek and emerging from the corners of the mouth. To the cheek end of the ligature was fastened a No. 12 F. soft rubber catheter. This catheter was now drawn through the cheek and made to replace the ligature, likewise emerging from the corner of the mouth. To the proximal end of the catheter was affixed a fine silver wire suture in such a manner that, while it served as a suspensory suture, it did not occlude the catheter. The silver wire was so twisted upon itself close to the catheter that only a single strand protruded. The catheter was now drawn upon in such a manner that the cheek end disappeared in the tissues for a distance of about half an inch, leaving the single strand of silver wire protruding from the fistula.

The fistula was next stitched with fine catgut, about the single strand of silver wire, and the wound sealed with iodoform collodion. The strand of silver wire was now passed through several layers of iodoform gauze, and finally through a small lead plate, to which it was firmly secured. The free end of the catheter was next anchored loosely with a strand of ligature-silk, extending from the eye of the catheter to the lead plate. This, to a certain extent limited the movement of the catheter, and kept it out of harm's way. It would have been as well, perhaps, to have anchored the ligature by a piece of rubber plaster upon the patient's face or neck.

By the arrangement described, the saliva was afforded a means of escape, which relieved all pressure in the direction of the fistula. Saliva flowed so freely through the "countersunk" catheter immediately after the operation that it was necessary to catch it upon a pad of absorbent cotton. Not a drop of saliva subsequently escaped through the fistula. At the end of ten days the suspending wire was cut, and the catheter and lead plate removed. The dressings were allowed to remain three or four days longer. Upon their removal the fistula was found perfectly healed.



Doctor Lydston's method of anchoring the catheter

The saliva subsequently found egress into the mouth, from the normal orifice of Steno's duct.

The foregoing operation, aside from its features of originality, has a simplicity and directness possessed by no other operation for salivary fistula. It is, of course, admitted that the operation is not available for some of the more complicated varieties. I advance it merely as an operation for simple parotid fistula. More extended experience, however, may show the applicability of its principles to other forms.

Internal Versus Hypodermic Medication

By GEO. L. SERVOSS, M. D., Gardnerville, Nevada

UNTIL within very recent years, it has been the practice to administer most drugs by mouth, and even today this is the prevailing method; and, indeed, the majority of our remedies can be used in this manner, the results following quickly and satisfactorily. Within the past decade, however, much attention has been given to the introduction of remedies subdermally, intravenously, and intramuscularly by means of the hypodermic syringe, and these parenteral modes are gaining in popularity rapidly as their advantages are becoming recognized.

However, certain drugs and chemicals when given by the mouth lose much of their worth, for one reason or another. In many instances there is faulty absorption, either gastric or intestinal, and the medicinal agent passes through the alimentary tract, practically without result. Also, when drugs are administered in this manner, the condition known as idiosyncrasy is met with in some instances, and the drug either has an unlooked-for action or is rejected. Some drugs and chemicals produce other than the desired effect when taken by mouth. Thus, for instance, iron, while more or less of it may be absorbed, is liable either to constipate the patient or to irritate the stomach to such an extent as not to allow enough of it to be employed or to be administered over a sufficient length of time to gain the desired results. Other agents act in this or in some other manner to such an extent as practically to prohibit their continued use internally.

The question of absorption enters into the problem in every instance and is one of the greatest importance. Does the patient get sufficient of the medicament employed? Is there any assurance of a proper active dose when drugs are exhibited by the mouth? Is it not possible that some failures are due to the last-named cause? I do believe that they are.

Active-Principles And Other Agents Adapted To Hypodermic Use

Time was, and not so very many years ago, that it was practically impossible to employ more than a few of the plant-drugs in any other way than by mouth. Today, however, with the active principles of these plants extracted and isolated from the other plant contents, we have agents which are of absolute chemical purity and in such form as to be employable hypodermically. Consequently, when results are not forthcoming by the internal method, the hypodermic should be employed.

Until within recent times, morphine, strychnine, atropine, and a few other alkaloids were the only agents administered hypodermically. Today we find a list running up to fifty alkaloids mentioned for hypodermic use, some of them exclusively so. Numerous other remedies of this character are also suggested as applicable in this manner. In addition to the alkaloids, we find several of the entire-plant products employed in a similar manner. Among the more important are, probably, ergot and lobelia, which are both in everyday use hypodermically.

Added to the alkaloids and other plant products employed in this way, we find a legion of chemicals which have been so manipulated as to allow of their hypodermic use. Among this latter class we find various forms of arsenic in combination with other chemicals. Camphor dissolved in oil is so used. Iron, combined in organic form, is found more efficient than the older forms given internally. Under the later methods of treatment of syphilis, mercury, in addition to salvarsan or other arsenic compounds, is given in the form of one of many salts of the metal. Sodium glycerophosphate also is given hypodermically. In fact, the number of chemicals so used seems limited only through the lack of their being prepared in proper form for subdermal use.

Since the discovery, by Wright, in 1900 or thereabouts, of the efficiency of the bacterins, the use of the hypodermic syringe has gained by leaps and bounds. This class of agents, although endeavors have been made to prove the contrary, have been found practically inert when exhibited orally, but very efficient when administered hypodermically. Serums and antitoxins have been found inactive by the mouth, but very active when the hypodermic mode has been adopted. Consequently, the great necessity for the instrument has been observed more than ever.

Advantages of The Hypodermic Route

In the application of drugs and chemicals, the hypodermic syringe and method are valuable for two reasons. In many in-

stances, as in the use of morphine for the relief of pain or spasm, quick action follows the subdermal injection of the drug. In the treatment of internal hemorrhage with atropine, we, again, obtain quick results. On the other hand, there are some agents which are absorbed less quickly when administered intramuscularly; but this slow absorption may be desired. Among such are salvarsan and other arsenic compounds, the organic salts of iron, and other chemical agents. Consequently, the hypodermic method has a double value.

As a rule, when drugs or chemicals are employed hypodermically, we have warrant for all practical purposes, that the full dose administered will be absorbed. There is no such warrant when medicinal agents are given by the mouth. When the latter method is employed, we find the patient vomiting very shortly after each individual dose, with much loss of the agent employed, in all probability. In other cases, either the stomach or bowel may refuse, almost absolutely, to absorb the drug. In the latter instances, we know nothing as to how much of the drug has been taken into the system, and, so, are at a loss to know just what results to anticipate.

There are one or two agents which are absorbed from the buccal cavity, among them nuclein and nitroglycerin, the latter with as great rapidity as when given hypodermically. There are some agents which have contrary effects by the different method of application. Apomorphine, hypodermically, is a prompt gastric evacuant; by the mouth, it very frequently happens that not even nausea follows its use, it acting in this method of administration, as an expectorant rather than an emetic.

From the foregoing it is readily seen that, when it is possible to employ a drug hypodermically, much better results as a rule obtain than when the same agents are exhibited orally. Not only is this true, but in many instances the amount of drug or chemical required to obtain the desired result is much less by the first-mentioned method. There is a practical assurance of no drug loss with the hypodermic method, while there is no such thing in the case of many drugs when employed internally. Consequently, the matter of dosage is settled to a fine point for the hypodermic method. To my mind, whenever it is possible to employ the hypodermic method, it should be used by preference.

Refraction for the General Practitioner

By THOMAS G. ATKINSON, M. D., L. R. C. P. (London), Chicago, Illinois
Author of "Essentials of Refraction"

Subjective Refraction Tests

WE NOW come to the subjective method of testing refraction. This test depends upon the acuteness of vision. Not that it is in any sense an estimation of visual acuity; but we utilize the visual acuity, as a known and definite quantity, by which to estimate the refraction as an unknown and indefinite one.

First of all, we make certain (in a way that I shall explain in a moment) that the visual acuity of the eye is normal; then we create a set of conditions under which an eye with normal acuity and normal refraction ought to be just able to see and interpret the test-object. The result is that the ability, or the inability, to do so rests entirely with the refraction.

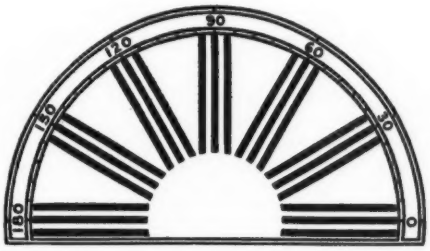
The mechanism of the test involves the application of two optical principles, viz.: that of the parallelism of rays, and that of the minimum visual angle.

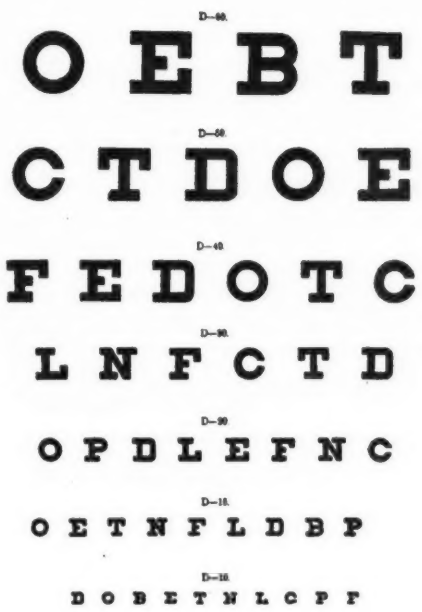
We already have seen that the dioptrism of the normal eye is such that, with its accommodation at rest, it is able to focus parallel rays of light exactly upon its retina, and thus, so far as its refraction is concerned, to obtain a clear image of the object from which such rays proceed. We also have seen that an object must subtend a minimum visual angle of 5 minutes in order to be perceived by an eye with a normal acuity of vision. (Strictly speaking, of course, this is a function of the brain, but it depends upon the propinquity of the rods and cones, so that practically we may refer to it as a function of the eye.) If, therefore, we arrange it so that rays of light from an object fall upon the eye in parallel groups, and so that the object subtends the minimum visual angle of 5 minutes, then, if the refraction of the eye be normal, it will be able to see the object clearly; but if there be the least error of refraction the image will be blurred.

These, then, are the conditions which we create for the purpose of making the subjective test. The object, or objects, employed generally are letters of the alphabet, because

they constitute about as delicate tests of perception as we have; but they need not necessarily be letters, and, in fact, we are obliged to use other objects when the individual can not read. The important points are: first, that they be of such a size, both in vertical and lateral dimensions, as to subtend, at the distance at which they are viewed, the minimum visual angle of 5 minutes; and, second, that they be at such a distance that the rays of light reflected from them fall upon the eye in parallel groups.

The first of these two requirements is provided for in the test-charts furnished us by the optical houses, wherein the letters are accurately scaled to this angle and marked for the distances at which they are scaled. The second is fulfilled by placing the chart at a distance from the eye that will insure parallelism of the rays which proceed from it; that distance, as we know, being 6 meters (or 20 feet).





The Test Applied

Having, then, a test-chart hanging on the wall in a good light, we seat the patient 6

The stenopaic slit

meters (or 20 feet) away, straight in front of it, and direct his attention to the line of type marked No. 6 or No. 20, as the case may be. If he can read it clearly, it is evident that his refraction must be either normal or else hyperopic. If it be normal, he is reading it without any accommodation. If hyperopic, he is using some accommodation in order to get clear vision.

How shall we determine whether he be normal or hyperopic? Very simply, indeed. By merely putting up before his eye a weak plus lens, say, a 0.50 D. If he be normal, this lens will immediately blur the type, for it will bring the focus a little forward, and, as his accommodation is already as relaxed and his crystalline lens as shallow as he can possibly make it, he cannot bring the focus any further back. If, however, he be hyperopic and is using some of his accommodation, as soon as the plus lens is put before him and the focus is moved forward, he will promptly relax the accommodation he is exerting, flatten his crystalline a little more, and again bring the focus on to his retina, so that the image will not be blurred. So, then, if a weak plus lens blurs, his vision is normal; if it does not, he is hyperopic.

But suppose that with no lens at all before his eye he can not read the type. In that case he either is myopic or astigmatic—perhaps both—or else his visual acuity is below normal, i. e., there is something the matter with his retina.

We proceed at once to determine this latter possibility by putting before his eye what is

called the pinhole disc, an opaque disc with a pinhole bored in the center. This has the effect of keeping out of the eye all light-rays except the central ones, which fall on the yellow spot; and, inasmuch as these rays do not undergo refraction at all, his vision will be considerably brightened by this procedure. But, if there be an organic disease of the retina, it will not improve his vision to cut out the refracted rays; on the contrary, it generally will make it worse, because the yellow spot as a rule is worse diseased than any other part.

Assume, then, that the pinhole disc does improve vision. Then he is either myopic or astigmatic; and we must proceed to find out which of these two errors exists, and what is the degree of error.

Let us now go back to the point where we discovered, by means of the weak plus lens, that our patient was hyperopic, and ascertain the extent of the hyperopia. This is a very simple procedure.

Determining Degree of Hyperopia

We immediately place in the trial-frame a strong plus lens, which will completely "fog" his vision; and then we gradually reduce it, by mounting stronger and stronger minus lenses in front of it, until we find the point where he can just read the required line of type. The resultant plus correction is the measure of his hyperopia and of the strength of glasses that he needs.

Thus, we put up a plus 4 D., and gradually reduce it with minus lenses, until a minus 2 in front of the plus 4 enables him to read the line. Then plus 2 D. is his correction. We fog first, and gradually reduce, rather than gradually increase the plus correction, because it is easier to coax his ciliary muscle to contract than it is to coax it to relax; so, we force complete relaxation to start with, and gradually come down to a point where he can just read—a fraction beyond that, and he would begin to accommodate.

So much for simple hyperopia, which is the most frequent error, and the simplest to correct. Now suppose we have discovered that our patient is either myopic or astigmatic.

Our first care now is, to determine whether there is any astigmia. To do this, we direct his attention to the fan-wheel at the top of the chart. If he is astigmatic, these fan lines will not all look as black as one another to him; one meridian will stand out more clear and black than the rest. In that event, we proceed at once to the stenopaic slit test.

In the trial case will be found an opaque disc with a small longitudinal slit in it, and this we mount before the eye. This has the effect of cutting out all the rays except those which enter in one meridian, and by it we are enabled to test the refraction of each meridian of the eye separately. We revolve this slit in the trial-frame, until we get it at an angle which gives the patient the best possible vision of the type. (This need not be perfect vision, but the best obtainable.) This shows us the best meridian of refraction. If this vision be normal, the astigmia is a simple one, existing only in the other meridian. But, if it be not normal, we proceed to make it normal by putting up before the slit plus or minus lenses, as may be required, until we get normal vision. (Make a note of this correction.) We then revolve the slit to the meridian at right angles—that will be the meridian of worst vision—and proceed to bring that up to normal in the same way. The degree of astigmatism will be the difference between the two meridians: and, if the best meridian had an error, it will need a spherical correction of the kind and degree of that error in combination with the astigmatic correction.

For example. Suppose the slit at 90 degrees gives best vision, and this vision is normal. At 180 degrees, vision is worst, and requires plus 1 D. to make it normal. This patient has a simple astigmatism of 1 D. in the 180th meridian and no error in the vertical. His correction will be the difference between 0 and 1 D., i. e., 1 D. in a cylinder, with its axis at right angles to the faulty meridian, or, at 90 degrees.

Suppose, again, that the slit at 90 degrees gives best vision, but this vision requires a plus 1 D. to make it normal. At 180 degrees, the worst vision requires plus 2 D. This patient has a compound hyperopic astigmatism of 1 D. in the vertical and 2 D. in the horizontal meridian. Now, if we take a cylinder of the difference between these two meridians, i. e., of 1 D., and put it at right angles to the worst meridian, we shall have brought it up to the same degree of error as the best. Both meridians are now 1 D. hyperopic; but that means there is now a spherical error of plus 1 D.; so, we add plus 1 D. sphere to the correction, and the whole eye is made normal.

Once more. Suppose that with the slit at 90 degrees vision is at its best, but it requires a plus 1 to make it normal. At 180 degrees, with vision at its worst, it needs a minus 1 to make it normal. Here we have a mixed

astigmatism of plus 1 in one meridian and minus 1 in the other. We follow precisely the same rule, except that in this case we correct the best meridian instead of the worst, on the plan (previously explained) of always correcting with plus cylinders. A cylinder of the difference between the two meridians, namely, of plus 2 D., placed at right angles to the vertical meridian, will overcorrect it so as to make it equal to the horizontal. Both are now minus 1 D., and a minus 1 D. sphere will complete the correction.

The rule, therefore, is very simple. One does not really need to bother his head about simple, compound, and mixed astigmatism at all. Find the correction necessary to bring each chief meridian to normal; apply a cylinder of the difference between them, at right angles to the least convex meridian; and the balance will be purely spherical correction. In simple astigmatism, of course, there will be no "balance;" hence, no sphere will be necessary.

If there be no astigmatism, but only myopia, the correction is as simple as that of hyperopia. In that case, we simply mount successively stronger and stronger concave lenses before the eye until the patient sees clearly. In this procedure, however, we do not stop as soon as he can just read the letters, as we did in hyperopia, but crowd on the minus correction until we almost overcorrect; the object in each case being to incite the accommodation to do its own work.

But by far the simplest method of estimating astigmatism is by means of the Ophthalmo-Axonometer, already referred to in these pages (see page 543 in June number). With this instrument, we simply find, on the sliding-bar, the scale at which the most convex meridian is best seen, and make a note of it; we then slide the dial-chart along until the other meridian is best seen, and make a note of that; the degree of astigmatism is the difference between the two, to be corrected with a cylinder of that strength, with its axis at right angles to the first-found meridian.

Cardinal Points to Remember

Always have a good light in making type tests. Daylight is best; but artificial light is better than poor daylight.

Always test each eye separately, by each method, excluding the other eye meanwhile by means of an opaque disc.

Always begin with convex lenses. They relax the ciliary.

Never be satisfied with one kind of test. Confirm it by other methods.

Have a system and follow it out. Nothing weakens a patient's confidence and confuses the refractionist like aimless pottering.

Some Accuracies of Practice

The Correlation of Precise Methods of Diagnosis and Treatment

By B. G. R. WILLIAMS, M. D., Paris, Illinois
Author of "Laboratory Technic for Practitioners"

EDITORIAL NOTE.—With this article Doctor Williams' series is brought to a close. However, we shall hope to be favored by the doctor with many more contributions in the months to come.

IN GLANCING down the classified advertisements of the medical journals of the future, we shall doubtless read notices something like the following:

> Wanted—A Barber-Surgeon—A man who can perform most of the technical cutting operations is desired by a busy diagnostic nurse. Applicant must be single and furnish proper references. Board and laundry will be allowed, not to speak of the experience. Must be able to read German and French; also, to write articles to which my name can be signed, such articles to appear in diagnostic nurse-journals. Must be able to perform cranial, mastoid, and thoracic operations and all other routine technical procedures common to a surgical laboratory. In case any knowledge of medicine is shown at the end of ten years, successful applicant will be given opportunity to do some diagnostic work. State experience. 97673A.

Sure thing! It is merely a question of supply and demand. The operator now demands the diagnostic nurse—the maiden who can do the bacteriologic, blood, gastric, urine, serum, and tissue analyses (all these minor little stunts), and advertises in our medical journals for such girlies; diagnosis nowadays being quite a matter of nonmedical technic. But these are the days in which, according to our hospitals (where medicine is at its best), diagnoses are correct in twenty-five percent of all cases.

The opportunity for the nurses is one not to be despised, and this demand will be met eventually, doubtless more than met. For, meanwhile many of these operators will become discouraged, because they can secure none of these diagnosticians, and will give

up the struggle, selling fruit-trees or vacuum-cleaners for a livelihood. And, so, when the nurse-universities turn out their sweet girl graduates, they will find a dearth of technicians prepared to remove appendixes, gallstones, ingrowing toenails, and all that. Be ready, brothers, to fill in this gap.

"Ahem! Owah pawthologist opines that this tissue is not malignant! So, let us proceed to remove the offending organ. Ahem! Won't someone please hit Williams with a brick?"

The Colon Bacillus at the Bar

Pug Andrews is a respected citizen. He votes, pays his taxes and is scarcely known to the cops. But some dark night he is caught climbing a porch. He may have done the trick many times before and got by with it, but now he is forced to face the music. But what for Pug is much worse than the punishment for the single offense is his loss of prestige. His photo goes into the rogues' gallery and his history into the memories of the police. They all know him now. Let another stunt of the same sort be pulled off, and it looks very much "like his work." Indeed, he must be prepared with many a good alibi in the years to come.

And so it is with the colon bacillus; everybody's down on him nowadays. Perhaps he stands for many sins not his own, but he does deserve much that is coming. Time was when the ubiquitous staphylococcus bore the blame for all urinary infections where the sweating-process could not force confession from the sneaking rod of Koch. But later it was learned that Monsieur Colon Bacillus, a fairly well-behaved germ when residing in the large intestine, often wanders to other portions of the body, and upon such occasions quickly forgets his manners and gets into mischief. In other words, as one man has put it, a colon bacillus is not a colon bacillus when located in some anatomical region other than the bowel.

We cannot go into the morphological, staining, and cultural characteristics of the colon bacillus, in an article of this scope. Suffice it to say that the diagnosis must be based upon more than the mere finding of rods in the urine.

From a clinical standpoint, the colon bacillus may be defined as that microorganism most likely to cause pyelitis in young girls and perineal infections in old men. The first group of cases is the large one. All women, but especially girls, are subject to these infections. Invariably the renal pelvis rather than, or rather in addition to, the bladder, is involved. In other words we have to deal with a pyelitis or pyelocystitis, rather than with a simple cystitis. There may be no local symptoms, but chills, fever, and sweats. An examination of the urine may be neglected and a diagnosis delayed or never made. In other cases there may be symptoms in the region of the kidney. In the greatest number of instances, the bladder symptoms are the prominent ones.

Once thought to be ascending infections, we now doubt this. There are many reasons for this change of opinion, but two are very convincing. 1. These infections appear to be no more frequent in women after confinement than at other times. 2. The colon bacillus at the anus is much less likely to become exalted than when higher in the bowel. In fact, we know that perhaps more than three-quarters of all the bacteria in the feces are dead by the time the anus is reached. The colon bacillus must be exalted sufficiently to survive the bactericidal action of the blood in order to produce pus where it finally entrenches itself.

Colon infections may occur in the tissues as well as in the mucous membrane of the urinary tract. In the former, we note a phenomenon that rarely is seen in the case of colon urines: I speak of the diagnostic value of the colon odor. The bacillus has much to do with the decomposition of proteins, and the fetor may approximate very closely that of neglected fecal material.

In this connection, there is another point that has appealed to me as one of prognostic value: these exudates may remain quite odorless until toward the end of the disease. This may be defined as a farewell odor, meaning, doubtless, that the bacillus has made his last stand. Not only has he lost those properties (pathogenic) which were given him by exaltation, but, dying, he hopes still to live, being content with saprogenic functions.

Of course, many other types of pus are foul, but the colon bacillus seems to have them all bested. In other words, according to the old slang, the colon odor is "some odor," and one which might cause the proverbial and esthetic canine to retire hastily from the vehicle of putrefactive intestines.

Treatment of Colon-Bacillus Infections

To whip the colon bacillus, we must know something of its habits and weaknesses. The colon bacillus does not thrive in an alkaline medium; and, so, the urine should be rendered and kept distinctly alkaline, is the

advice offered by Marsh and others. The colon bacillus is quite easily embarrassed by the use of urinary antiseptics, and this has given rise to another line of treatment. These two modes of attack cannot well be combined (antiseptics acting less well when given with alkalis); but they may, with profit, be alternated in certain cases, inasmuch as one line of treatment may aggravate and cripple but not destroy the guilty rod. We have found that in spite of all treatment some of these cases become chronic, long periods of quiescence alternating with acute or subacute exacerbations.

So far as the alkaline treatment is concerned, Marsh and others advise large dosage either of the citrate or of acetate of potassium, or of the carbonates. The dosage will depend upon the intensity of the acidity. The object is, to render the urine alkaline and keep it so for considerable periods of time. The citrates are most efficient, but often give rise to digestive disturbances. In such cases, it is well, as soon as the urine is rendered alkaline, to change to the carbonate or bicarbonate.

So far as the antiseptic treatment is concerned, the urine must be acid before hexamethylenamine is given. If it is alkaline, change to acid. Do not hope to conquer the colon bacillus with 5-grain doses. Give 15-grain doses three or four times daily for several days; then rest. Then repeat the attack. Alternate nonmedication with mammoth dosage of the drug, and the colon bacillus may be kind enough to run up the white flag.

Vaccines are usually advised. Better use them later. They appear to do but little at first, but may cinch the victory.

"Or you might inject silver solutions directly into the renal pelvis," butts in the abdominal technician. "It stands to reason——"

Hold, brother! Your chance will come a bit later. We have found that these injections are actually dangerous and quite uncalled for.

Renal Tuberculosis

I need not enter deeply into this much-discussed disease of tuberculosis of the kidney, nor do I need repeat that primary vesicle tuberculosis is rare, the infection here being but part of the picture higher up. Medical treatment is inefficient, and is unwarranted unless it is likely that the disease is bilateral. The surgeon must help us out here—*always;* give him but the diagnosis. Remember what has been said concerning the early high acidity, the mononuclear cells and apparent sterility of the urine, along with the clinical history, the physical examination (especially of the lungs), and the possibility of finding the tubercle bacillus either by smears or animal inoculations.

Other Infections

In gonorrhea, a urethral discharge is the rule and urines rarely are examined for the gonococcus. However, such an examination may be necessary in some cases. This series cannot well go into the treatment of gonorrhea, for the gonococcus must be almost as extraneous to the urine as is the smegma bacillus. The following, from the thousand and one lines of treatment, are best known.

In the very earliest hours, strong astringent injections, in the hope of aborting the disease; put the patient to bed, if possible, during the acute and severe symptoms; irrigations with permanganate, boric acid, and so on; injections of galactenzyme suspension; in selected cases, administer copaiba-oil or santal-oil by mouth; in the late cases, use vaccines, and other promising biologic agents.

Now and then (very rarely) a urethral infection or irritation is seen which cannot possibly be a true gonorrhea. Proper examination will show diplococci, which are elongated rather than biscuit-shaped, never arranged in tetrads, rarely found in the cytoplasm of the pus-cells, and invariably resistent to Gram's decolorization. They doubtless are exalted forms of the diplococcus urethræ communis. A few days on arbutin, 1 grain every two hours, will effect a cure. No complications appear to follow these nonspecific urethral infections. It is well to repeat that such infections are very rarely met with, the majority being truly gonorrheal.

In certain instances, the staphylococcus appears to play the chief role in kidney, bladder, and urethral infections. It is especially likely to act the part of secondary invader in protracted gonorrheas. This point must be kept in mind when administering vaccines.

In many organic diseases of the bladder, there may be retention of urine, with the result that saprophytic bacteria gain a foothold and lead to fermentation. The chief object is, of course, to remove the primary cause of the retention; for, as soon as the urine is quickly passed from kidney to the urinal with but little delay in the bladder, these bacteria cannot maintain a foothold. While this is being accomplished, the physi-

cian need not wait; but, recalling that all bacteria, and especially saprophytes, often are conquered by means of hexamethylenamine, he should proceed to render the urine acid, and exhibit this drug in large dosage.

Conclusions

This concludes our little series upon the therapeutic indications suggested by the uranalysis. Do not forget the uranalysis when diagnosticating: do not forget the uranalysis when treating. These are the main truths I have sought to impress.

Other subjects I have touched. Not in apology, but, rather, in explanation, I must state that the surgeon has come in for some jabs only so that certain laboratory truths might be impressed. (Far be it from me to stir up a ruction with one so skilled in the use of the knife.) I keep in mind the caution that, though lawyers knife the layman and minister to each other, physicians minister to the layman and knife each other. We all carry around a few wounds healing by second intention; but they will heal eventually, and we be the stronger by the scars.

The Doctor's Vacation

A Symposium by Readers of Clinical Medicine

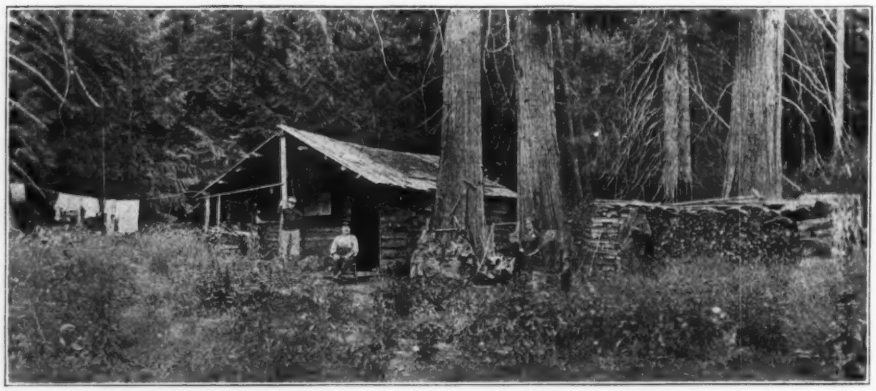
EDITORIAL NOTE.—Every year we receive repeated calls for help from physicians who are planning to take at last the long-hoped-for but long-deferred vacation. One particularly strenuous plea of this kind reached us a few weeks ago; and, accordingly, since we always try to give the "family" what they want when we can, we determined to "round up" a goodly bunch of our regular vacation going (or living!) army, and compel them to stand up and tell their little stories. You'll like them, of course—if you do not, then you are hard to please. But—are YOU going to take a vacation? If you do—and I hope you may—we shall expect a report from you next year. Now for the stories!

AN IDAHO OUTING

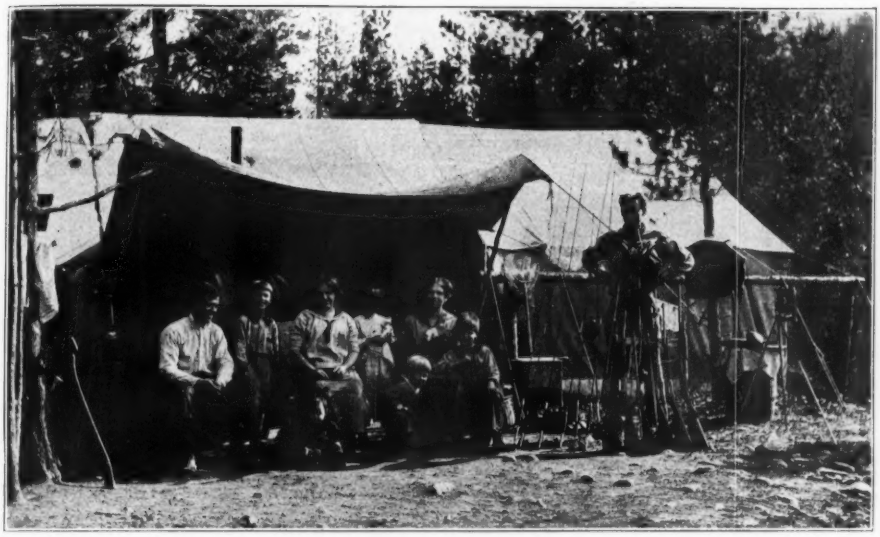
By Charles Stuart Moody, M. D., Hope, Idaho

DOCTOR, let's sit down here alone and, over a good cigar, lay some plans for your summer's outing. I assume that you intend to get away from the harness for a time this summer and "soak your soul over hub and spoke," in the joys of God's out-of-doors. I realize that one of the most difficult things confronting the doctor, after he has persuaded himself that suffering humanity actually can get along for a month without him, is the problem of where to spend the vacation he has so richly earned. What confronts him is, that every railroad has its favorite resort, and every railroad stands ready to rain seductive literature, setting forth the advantages of that resort, upon the devoted head of the unsuspecting mortal who is rash enough to make inquiry. Two things the good God does not seem able to stop, once they get started, are, one, the deluge of railroad-folders, and, two, automobile catalogs.

Now, know ye, right off the bat, that I am opposed to all resorts and to all highly advertised show-places reached by some particular railway or steamship line. These spots generally, when you arrive, degenerate into a palatial hotel, a hot spring about the size of a teakettle, or a "lake" but little larger than



How would you like to camp here?



Wendle and his "bunch"

a bath-tub, said magnificent lake filled with striped perch, a half score of trained black bass, a few mudcats, and circumnavigated by innumerable mosquitoes. For all of which the poor, hard-working medic must surrender coin of the realm, until his bank-account suffers from life-threatening inanition.

I am equally ferninst the famous railroad show places, such as the Yellowstone National Park, the Glacier Park, or all other localities where nature seems to have run riot. The innocent and unsuspecting disciple is sold a railway ticket that includes a trip through one of these show places and is suavely assured by the gentlemanly agent that this strip of paper entitles him to all the rights, privileges, and immunities of an American citizen, including the right to fish the streams, scale the glaciers, watch the spouting of the geysers, feed the grizzly-bears, and do all manner of stunts set forth in the highly illuminated advertising.

To be sure, a little prudential attention to the details of said ten-foot time-card would reveal the fact that there hardly is breathing-time allowed for him to catch any great number of trout or feed any multitude of hungry bears; for, the plain fact is, the tourist is rushed through as rapidly as horses can travel, in order that the transportation company may get back to headquarters and seize another load of victims. One catches only glimpses here and there of the wonderland he has come so far to see. The beauties are there, and the man who takes the time will find them; but not a one will discover them from the top of a stage-coach or the hurricane-deck of a cayuse. Yes, indeed, it takes months to explore either Glacier Park, the Yellowstone, the Yosemite (alas, the poor old Yosemite has fallen under the greed of man) or the Grand Canyon.

Take my advice and do not attempt any of

Breaking camp at Kilroy Bay

Our woodland goddess

the "personally conducted" through any of the great show places of the West: also absorb another large chunk of advice, and steer several points clear of the palatial summer hotel, with its "finest fishing, bathing, boating." Either of these diversions is a delusion and a snare so far as the health hunting, recreation-seeking doctor is concerned.

"Where, then, would *you* have us go?" methinks I hear some curious reader ask.

The answer is simple and ready. Come right out here into northern Idaho, fetch along a good appetite, a tent, blankets, a fishing-rod or two. Get off at Hope, climb exactly 83 stair-steps leading up from the depot to the street, open my office-door, look in and say "Howdy," then leave the rest to me—I'll be there, ready to tell you where to go and how to have the one bangup good time in all your toil-worn existence. If you have a suspicion that I can't make good, just sit down and drop a line to Dr. Floyd G. Wendle, Danville, Illinois, or mayhap to the editor of this journal, and ask either of them about it. (By the way, this applies only to doctors, dentists, pharmacists, and their sisters and their cousins and their aunts.)

All this information is without money and without price. I'm doing my part of it for the fun I get out of it, and for the further reason that there is not a bit of selfishness in my physical makeup and I am more than willing for my brethren to enjoy all the things I enjoy, and from the still other excellent reason that "when fishing interferes with my business I quit the business." I am ready to help you have a good time. Moreover, if any merchant, dealer, tradesman, artificer, mechanic or any person, firm or corporation overcharges you or yours for any goods, chattels, provisions, supplies, material or labor, give me the name or names of said person, firm or corporation, and I shall see to it that such is, or are, shot at sunrise, without the "chanst" to say their prayers. All of which is to intimate that our people, instead

One of our trout streams

Just cold tea—that's all

of preying upon the stranger within our gates, heartily welcome him; and that you can buy your grub and camp supplies just as cheaply as can I, myself.

So much for that. Now it becomes necessary for me to make my "bluff" stick. Hope is located above Lake Pend Oreille, and Lake Pend Oreille is—bar none—the greatest body of fresh water on earth. When I mention Pend Oreille and you look it up in your cyclopedia, pray, do not look for a frog-pond, but for a vast inland sea, dotted with emerald isles, fed by clear mountain streams. Its waters are thronged with trout, its shores indented with beautiful land-locked bays, where evergreens come right down to the water's edge and grassy meads afford the loveliest camping-sites for all who care to come—without let or hindrance or charges.

During the summer season the water is fine and bathing in the sandy shallows one of the delights of the wife and kiddies, and of which the illustrations convey but a faint conception. The boating at all times is good, and nothing in life is finer than to float in the shadow of the granite-ribbed old hills and watch the trout play.

Of course, it is the fishing you are interested in—being an angler, like myself, why should you not be? It is almost impossible to tell about the trout fishing in Lake Pend Oreille without one's degenerating into guidebook literature; from which heaven deliver me.

The only way for me and the best for you is for me to tell you the simple, unvarnished truth, then offer to bet you I can prove it when you arrive here. Glance at illustration and you will see a representation of a fair specimen of our charr-trout. This little chap weighed exactly 16 pounds when taken from the water, and he was hooked on a No. 2 Wilson spoon not half a mile from Hope dock and fought for over an hour for his freedom. I cheerfully promise to duplicate the performance for you any day in season, if you care for that kind of excitement. The little fellow hanging beside him is a 2-pound cut-throat-trout, of which you may load a boatful any day should you see fit to do so. I should advise you, however, to limit your daily catch to 20 pounds, for there is a keen-eyed warden here who keeps watch and ward over the finny citizens of the bluey deep, and is their particular friend. Nonresident fishing-license costs only $2.00, and may be obtained at all drugstores and from justices of the peace.

All the fish, though, are not in the lake alone. The streams round-about abound (I believe that is the accepted term) in just as pugnacious fish as you care to encounter. If you have spent your angling-life hitherto in fishing with what we call a "plunk"-pole

A sixteen-pound charr

and a worm for bait, better come on out here and let me initiate you into the sublime mysteries of the fly-fisher's degree. Fly-fishing for stream-trout is sport, recreation, art, and not a little labor, all combined.

Just roll out of your warm bunk early in the morning, while the mists are yet heavy on the water, swallow two cups of hot coffee, several rashers of fried bacon, two eggs, and half a loaf of bread, then gird up your loins and follow me over "bog and fen and foul morass," up to where a clear cold stream comes tumbling right down from out the glaciers, unlimber your fly-rod, tie on a royal coacham and a black gnat, slip off a rock into the ice-cold water hip deep—and then watch the fun.

The joy of fly-fishing is not so much in the trout you catch as in watching the play of expression on the face of dear old Mother Nature, listening to the wood's sounds, to the sighing and soughing of the wind surging through pine-tree tops, the ripple of the waters over the boulders, the liquid-clear song of the water ousel—yea, it is all of these that combine to render a trip into the fastnesses of Idaho's mountains a memory to be treasured through all the years that may come, a recollection to return to when the storms of winter howl about the office and a snug fire in the hearth invites remembrances.

Bathing Baby—Lake Pend Oreille

The good editor has requested me to specify what the intending visitor ought to take along for such a visit here. Truth to tell, you should fetch but very little. Of tackle, perhaps your favorite rod and creel. Tackle can best be obtained, no matter where you are going, at the place where you intend taking your departure from the railroad. The reason for this is not far to seek: dealers generally manage to keep the peculiar kind of tackle affected by the fish in their respective locality. So it is here, the fishing-gear in use in the East or the Middle West would be useless here in Idaho. The same is true of camping-outfit. Do not load yourself down with impedimenta that can be procured just as cheaply at your destination. A good wall-tent and such additional tentage as you may require may be brought along, checked as baggage.

Bring bedding, of course, in such quantities as will keep your party comfortable, remembering that our western nights always are cool; and you will require at least two blankets per person. I cannot refrain, though, from mentioning one little article that has proven indispensable to me, and that is the Stopple "kook-kit," a handy arrangement for cooking when on side trips, which occupies but very little space and can be carried in the pocket. A good pack sack should also be supplied, although this may be procured locally, also.

As to clothing, every man has his own notions. I cannot buy your camping-clothes any more than I can wear them. Avoid the *outre* in garments and confine yourself to good, serviceable woolens and ducks. For fishing, nothing is quite so good as either khaki or duck. Do not wear woolens when fishing, unless you have a middling firm grip on your religion; for, of all things, woolens are the worst to ensnare hooks at the particular moment you do not wish them to be ensnared. Woolen undergarments and heavy woolen socks are necessary at all times for stream fishing, for then (if you follow me) you will be wet from morning till night.

The ladies will do well to provide themselves both with divided skirts and overalls. All our western ladies, when camping, wear ducking overalls, and do not feel their modesty shocked in the least. For footwear, heavy shoes with hob-nails are necessary for mountain work, while tennis-shoes are the thing for camp and for boating. The ladies will do well to bring along high-laced boots, for there

are brambles to be encountered on all the mountain trails.

Then, also, the good editor wants me to tell *where* to come to. Of course, I wish you all to come direct to Hope; for then I can take care of you in a manner befitting your station and desires. However, this lake is a great, big sheet of water and there are hundreds of miles of shore line, reached by four railway lines and two lines of steamers, any of which will carry you and your duffel to a desirable camping-place and help you to get located. I don't much care where you come on the lake, just so you come, and after you get here send me word that you *are* here. Then some fine day you will see me showing up in the offing with the Papoose under full power, paying you a visit.

A PROFITABLE DOCTOR'S VACATION

By William Rittenhouse, M. D., Chicago, Ill

FIRST of all, much depends upon individual taste and temperament. The time was when a fishing or hunting trip would have seemed to me the ideal vacation. But I have lost my taste for killing things; now I can get far more pleasure out of the wild creatures by studying their habits and ways of life than I ever got from killing them.

No one ever had the "blood-lust" stronger than did I in my youthful days. No prospect of a holiday filled me with such excitement as the one when I could take a gun into the woods and slay any wild thing that might cross my path. And, yet, even then I felt a twinge of remorse at the pathetic look of reproach in the glazing eyes of some creature whose little span of life I had cut short for "sport."

Perhaps I can best indicate my conception of an ideal vacation by mentioning some of those I enjoyed most and the ones that I am planning for the future. This year I had intended a horseback trip in the Sierra Nevada Mountains of California. The plan was, to enter the mountains at Yosemite, explore the valley and the National Park around it, and then, with guide, pack-animals, camping-outfit, and one, two or three congenial companions, make my way by the trails of the high Sierras south to the Kern River country; little more than a hundred miles as the crow flies, but by the winding mountain-trails far enough to furnish from two or three weeks of glorious mountain travel.

In planning such a trip, it pays well to make a preparatory study of the region—its geology, its animal, bird- and plant-life. For more than a year I have been making such a study, by reading John Muir, Smeaton Chase, John Burroghs, Mrs. Parsons, Stewart Edward White, and others; and I know that, when I make the trip, this reading will increase my pleasure at least five hundred percent. That most people, in traveling, miss more interesting things than they see, because they

More good trout water

do not know what to look for, is a truism needing no repetition.

An attack of neuritis having put a horseback trip this year out of the question, I have postponed the undertaking outlined, and have substituted for it an automobile trip from Niagara Falls to Philadelphia, tracing through the Alleghany Mountains the route followed by my father and mother a hundred years ago, when, as pioneers, they emigrated from eastern Pennsylvania to Canada. Thus I try to make each vacation serve a definite purpose.

Several years ago I made a trip through Wisconsin, Minnesota, and Manitoba, for the purpose of studying the glacial geology of that region; my special objective being, to trace the old river-bed by which Lake Superior drained over into the Mississippi during the latter part of the Ice Age.

Even the kiddies catch fish

Really, I know of no study that can add so much pleasure to vacation trips as glacial geology. Besides, it is the easiest of all the natural sciences—a veritable lazy man's study. A very little reading will give one an idea of what to look for, and then every railway journey, every walk in the country, will reveal interesting things that one was wont to overlook before. The traces of the great Ice Age are all round us, if only we have eyes to see.

In my estimation, the average crowded summer resort is a poor place to take a vacation. Possibly it is better than nothing, but it seems to me like eating dry husks when wholesome, enjoyable food is within reach.

I have spent a number of vacations on Mackinac Island; not, however, because there are crowds there, but in spite of that fact. I love that island because it is rich in history and Indian legend, because of its natural beauty and its wealth of plant- and bird-life, its grand forests and its curious rocks and the everchanging fresh-water ocean around it.

To sum up:

1. The ideal vacation should afford outdoor life and communion with nature. The greater the number of the natural sciences one is familiar with, the richer the feast one will enjoy.

2. One should be neither too lonely nor in a crowd. One or two congenial companions are enough; more are liable to become irksome. One time a friend of mine was in the mountains of the California coast five months with no companion but his faithful horse, and he talked to it as he would to a human companion; and he claimed that the horse understood him. I, myself, greatly enjoy and understand my fourfooted friends; nevertheless, I do want a little human companionship besides.

3. Severe physical exercise is not desirable for persons accustomed to sedentary habits. Bicycle trips were excellent in their day, but the automobile, or, rather, the reckless chauffeur, has made the roads unsafe to the wheelman.

4. Walking is fine, if begun in moderation, giving the feet and muscles a chance to become hardened. Here, also, a good companion is desirable.

5. I cut out all reading when on a vacation, especially novels. I want my eyes and brain to have a perfect rest.

WHY NOT COLORADO?

By L. E. Likes, M. D., Lamar, Colorado

NO DOUBT there are many problems that face members of the profession, that come up daily to be solved and require considerable attention, but I am free to confess that among our various perplexities the one to give me the greatest concern was in deciding upon a vacation that would be profit-

A Colorado mountain scene

able and at the same time economical. As to the latter, I do not mean to draw the line too closely, but just for the average practitioner who, let us say, takes in about $2000 per year.

When in college, struggling along for the pigskin that was to land me at a long-desired goal, I had pictured to myself the same castles in the air that others have done, those periods of brief respite from the maddening toil that should temper the hardships of life's struggles. However, after entering practice, I was quick to learn that those dreams, at least in the earlier days, were not to come true.

In bucking the line good and hard, I quickly found my weak places, and made up my mind that the vacation-idea was to be held in abeyance until I had taken that needful post-graduate (same old story) work in a certain celebrated hospital. This, accordingly, I did. Notwithstanding that I put in longer and more vigorous hours while away on this mission, my patients and friends on my return home complimented me on my appearance and would have it no other way than that I had been enjoying a great vacation; and they apparently envied me, since they, themselves, were unable to get away from the stress of business. Right then and there I made a solemn vow that I, too, at a not distant date would go in for the real kind of a vacation.

My first intentions were good, especially so upon my return home; but I soon drifted into the old channel, from which it is so hard to rescue oneself. I let the idea drag along a little, until at last I found it absolutely imperative that I seek at least a brief change. And now to my experience.

Charles Owens, an old pal of mine when doing "prep" work at the University, for a number of years had been writing me to come and spend a few weeks or months on his ranch on the Gunnison River, on the western slope of the Rocky Mountains. Consequently I now decided to accept this standing invitation, as my practice was in such a shape that I could conveniently leave it for a while.

I arrived at the Owens ranch the middle of August. Charley met me at the train at Gunnison, and we drove for a distance of about ten miles out to his ranch. It was a

The mountain ranch

Bruin on his good behavior

bright moonlight evening, and the exhilarating mountain-air proved wonderfully bracing.

It had been my fortune, during the short span of years I had traveled, to enjoy the best of accommodations, but I am free to confess I had never experienced such a night of deep, dreamless sleep. Just think of it—blankets in the middle of August! But the soothing breezes which swept down from the snow-clad peaks through the tall green pines and into my open cabin window required just such bed-equipment.

I was lost in fathomless space, when Charley came to my door and announced that breakfast was awaiting my pleasure. I quickly hustled into my khakis and big outing-boots, and after a short but thorough toilet appeared in the combination kitchen and dining-room.

My, what a feast there was awaiting me! Crisp mountain-trout, that Charley had pulled from the pool but an hour before just below the ranch cabin, greeted my eyes, while the board was laden with many other delicacies of the Hills, which only those know who have partaken of them.

After breakfast I suggested to Charley that we walk over to the foothills of one of the clusters of peaks which attracted my curiosity. Mrs. Owens was for fixing us up a lunch; but I protested, declaring that after a short stay we should return in time for the noon-hour meal. So, we started on our journey; but when noon came it seemed that we were no nearer the hills than the beginning. Imagine my surprise when Charley informed me that the peaks I was heading for were only seventy-five miles away.

The next morning we were up at sunrise, ready with our rods and flies to battle with the rainbow and the speckled trout for which the Gunnison is famous. I confess, it took considerable coaching before I had mastered the game sufficiently to make at least a fair trout-fisherman; still, our combined catch at that was not bad.

The following afternoon we went dove hunting, which certainly was some sport. During the short period spent away from the cabin we bagged the limit allowed by the law; and the dinner the birds made that night is beyond description.

I must mention here that the outing in the mountains was made complete with the assistance of Miss Alice Graves, sister of Mrs. Owens, whom I found very adept in aiding to win the rubber at whist, played in the big living-room by the light of the fire-place in which crackled rich resined pine-logs. And such a varied program was carried out for nearly a month. Alas, there came the time for parting, although I was loth to think of it. But, then, the mandates of prosaic existence brook not interference.

I am back home again, stronger in body and mind, and feeling better than at any other

We catch a "few"

time in my life. The expenses of the trip were practically nominal.

Give me the mountains for a tonic, I am going back again, you can depend on that. Those hills, that air, and Miss——!

TRY NORTH CAROLINA'S "LAND OF THE SKY"

By C. W. Hunt, M. D., Brevard, North Carolina

ONCE upon a time, in the days of long ago, old Father Æsculapius, worn and weary in ministering to the ills of mankind, knowing, as all good physicians know, that his case was beyond the reach of the healing herb or the art of man, prayed to his divinity, the Goddess Hygieia, to be shown the most restful, beautiful, and healthful spot on earth. While he prayed, wornout nature claimed her dues, and from sheer weakness he fell asleep; and as he slept he dreamed of a beautiful land where nature, that sweet restorer, lavished all of the beauties of rugged mountains and peaceful vales.

By and by he awoke to the song of many birds, above which thrilled the flute-like call of the Bob-White, and his enchanted eyes beheld the beautiful valley of the French Broad, pierced by the sparkling river and surrounded by the towering peaks of the Appalachian and Blue Ridge Mountains in all of their grandeur and sublimity. And, behold, in his dream "the half had not been told."

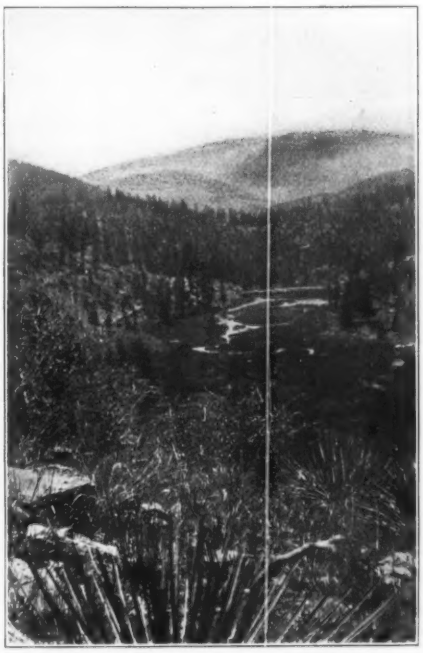
Entranced by the varying and shifting scenes on the dizzy mountain tops, the mystic shades of the mountain gorges, all veiled in the azure haze that glorifies the Smoky Mountains, his thirst allayed by the pure, sparkling waters from the purling springs, his brow fanned by the cool ozone laden zephyrs from the "forest primeval," his body became exhilarated, his soul rejoiced, and he lifted up his voice and cried out, "Verily, this is God's country."

As a true physician, having ever in mind the weak and the afflicted, he forthwith sat down and wrote this prescription:

"If thou art worn and hard beset
With sorrows that thou wouldst forget,
If thou wouldst read a lesson that will keep
Thy heart from fainting and thy soul from sleep,
Go to the woods and hills. No tears
Dim the sweet look that Nature wears.

"Send the people to the mountain,
To the lake and to the mountains;
To the hills and rills and woodlands;
That the sick may breathe the balsam,
That the weary may be rested,
That the children may be healthful,
And the joy be universal.
Bring them from the heat of summer."

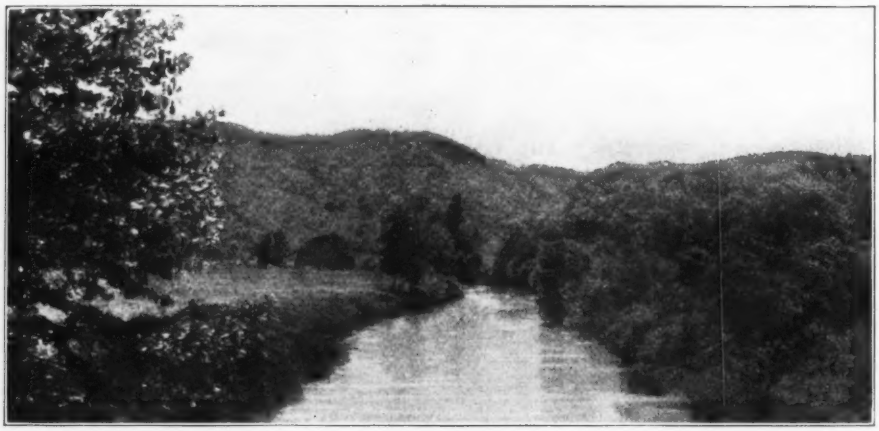
For myself, and in the name of the hospitable citizens of Brevard, North Carolina, I extend a cordial invitation to my professional brethren from the north, the south, the east, and the west to visit this our favored land. Let them command me in every way in which I can serve them—though I beg not to have my pulse, temperature or respiration taken, nor be forced to put out my tongue. Forget it all, doctor, and just rest—yes, and you *can* rest. Truth, had good old Rip Van Winkle, of Catskill fame, gone to sleep in these mountain abodes, he would be sleeping still.



A view of distant peaks

Warning: If any of the Knights of the Powder and Scalpel have a stomach like unto that of Timothy, they must bring their own pizen and snake-bite medicine. This is a "dry" section; however, the climate is so healthful that there is no contraindication to the use of anything the stomach may call for.

In a climate preeminently healthful and bracing, we find Brevard the Beautiful, at an altitude of 2250 feet, centrally located to all of the scenic points of interest in western North Carolina. It is situated between Asheville and the picturesque Toxaway Lakes in the Beautiful Sapphire Country, the



A placid mountain stream

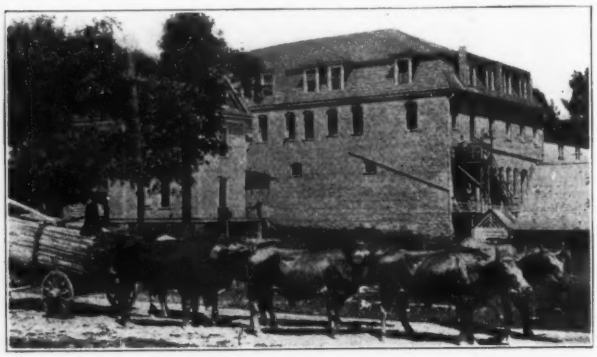
Land of the Sky, the Switzerland of America; in the land of fertile fields and sylvan vales, and of towering mountain-peaks; the land of rivers, rushing torrents, and mountain-lakes; the land of birds and flowers; the land of waterfalls; the fairy land of rest, health, and beauty; "the land where the weak grow strong and the strong grow great."

The tourist can enjoy roaming through the forests of majestic oaks, poplar, hickory, hemlock, trees of many species, and the sheltering azalias and kalmias that grow in profusion, with innumerable other varieties of wild flowers, and "the trees, the sylvan gods, the lovely company of haunted solitudes."

If so inclined, he can, with rod in hand, explore the foaming trout-streams, scaling cliffs and boulders at the risk of neck and limb; or walk or drive along the beautiful French Broad River and its valley, far famed for its beauty; or explore the gorges of the Smoky and Balsam mountains, and lose himself in their depths; or by bridlepaths ride to the tops of numerous mountain-peaks and look down four thousand or five thousand feet and feast his eye on scenery the most beautiful and most varied in America.

In summer, fishing is to be had around Brevard, and both fishing and rowing at the Toxaway Lakes. After the 15th of November, the sons of Nimrod can explore the valley for the Bob-White; the woodland for the gray squirrel and the woodcock, and penetrate the mountain-fastnesses for the pheasant and the wild turkey, bear, deer, and the red and the gray fox. To be sure, we have an abundance of Molly Cotton-tail and the "Possum Raccoon."

I would urge my visiting brother to eat, drink, and sleep. Hotel accommodations range from $1.50 to $3.00 per day; boarding-houses, from $7.00 to $10.00 per week; in the country, $6.00 to $7.00 per week. When possible, it is advisable to engage rooms in advance. Everywhere good, old country fare—chickens, fresh eggs, pure milk and butter, home-grown vegetables, and home-cured hams are to be had.



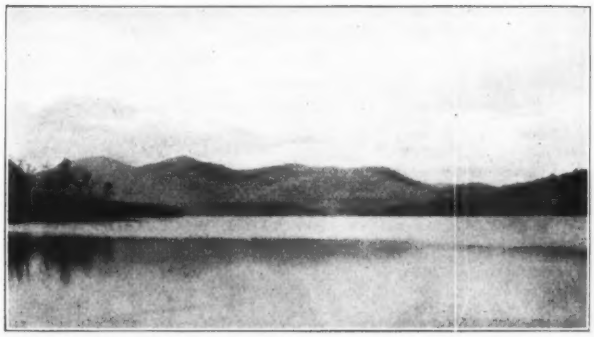
A lumber team, Brevard, North Carolina

A VACATION IN THE CUMBERLANDS

By M. G. Price, M. D.,
Mosheim, Tenn.

IT IS not far fetched to say that after a hard winter's work these frail bodies of ours are like an old elastic suspender, the stretch all taken out of it.

When summer comes we need something to restore our resilience. What shall it be? The high tension of professional life is responsible for much of the "wear and tear." The summer heat comes in for its share of responsibility, and there are many other causes. At the height of the heated season we are likely to find ourselves with all the stretch taken out. What shall we do to "come back"? That will bother many of us.



Lake Toxaway, North Carolina

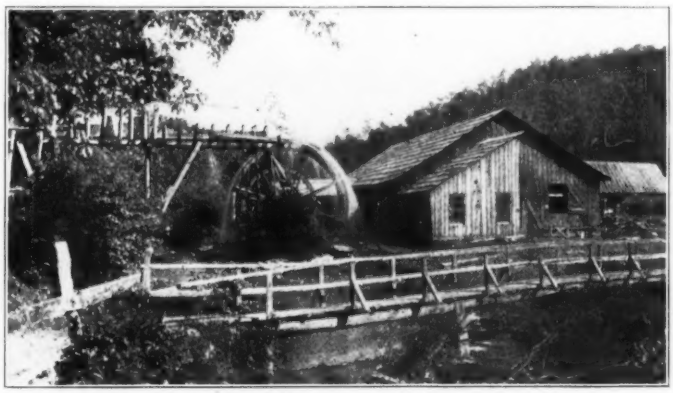
Rest is the cure for many of these ills, and rest is due us all. It may be long in coming but by economy and virtuous living we may lay by in store so that by and by we shall be able to quit this ceaseless struggle and calmly and restfully await the change that is coming to all.

There is rest for all things. On still nights
There is a folding of a million wings—
The swarming of honey-bees in unknown woods,
The speckled butterflies and downy broods.
In dizzy polar heights:
Rest for innumerable nameless things,
Rest for the creatures underneath the sea,
And in the earth and in the starry air.

But where shall we escape that we may recuperate from this exhaustion? I can answer that. Come to the mountain country of eastern Tennessee and you will solve the problem. Bless you, you can sleep under a blanket any night in July and August, and in comfort. So far as something to eat is concerned we always have it. The people are friendly and social, in contrast to many of the people from the north. You can go to the cities, if that suits your fancy. There are Knoxville, Johnson City, and others that are almost in the country and yet are in the mountains.

Also, we have private resorts high up on the mountain sides that will give you an unlimited vision of this great valley of eastern Tennessee, cut out by the action of the glaciers in that far off period of time (if you are fond of geology). And there's LaFollette, too, the queen of the Cumberlands nestling close in a great pass torn through the mountain sides by the action of the waters of an ancient lake now reduced to what is known as Indian River.

Look at some of the pictures I am sending you, and be convinced that there's no better place for real restfulness than this dear homeland of ours. Try camping out in the mountains, fish, if you like, in our mountain streams, get a good saddle-horse and make a jaunt into the depths of the Cumberlands or take an auto trip into the edge of things. Bring along the wife and children and live out of doors — come in rhododendron time. Don't be afraid because it's "down south." After all, we have the real restful summer resorts where you can enjoy every moment of your vacation. Why not Eastern Tennessee, *this* summer? Make your mind, Doctor and come this year.



An old saw-mill near Brevard

WHY NOT GO FISHING?

By Geo. H. Candler, M. D., Chicago, Ill.

JUST as the grass glinted the most delicate green under the warm rays of the late May sun and the breeze ruffled the emerald velvet of the lawn; when, despite every endeavor, one's fancy would stray and visions of tree-fringed blue lakes, odorous trails, white tents and red-gold fragrant camp-fires obscured even the most interesting clinical picture, the heartless editor dropped in and explained that he proposed to present a "Summer Vacation symposium" and counted upon me for a contribution under the caption "Why Not Go Fishing?"

Mountain scene near Greenville, Tennessee

Why not, indeed? The very thing I had been asking myself all day! Why not go fishing *now* when in a hundred brooks released from their icy fetters the water is swirling and singing around the rocks and logs; when in each eddy and pool the trout are lying ready to take the first fly presented; when the bass are seeking the shallows and strike fiercely at the lure skilfully cast into the reed pockets or under the deadhead! Why *not* go fishing today, when the odors of the awakened earth arise on every hand as incense to the Throne and the robins and song sparrows make liquid music in the dogwood bushes!

Why not go fishing—today? Because, to go to the right place—to wet one's line in worth-while waters would mean a journey of three hundred miles and necessitate absence from Duty (with a capital "D") for several days. And the man who shirked *duty* could never truly appreciate the song of the reel or comprehend the message of wind-tossed waters. To be in thorough touch with the spirit of stream and wood one's conscience must be clear and one's soul receptive. When one's hand has done as well as maybe that which it has found to do, when every call to the front has been answered and sustained effort brings weariness of mind and body, *then*, with a period of rest and perfect happiness well earned, Why not go fishing?

You couldn't do anything better if you tried provided of course that you go fishing under proper conditions and to the right place. Merely to go somewhere and catch a mess of fish somehow is *not* "going fishing."

If you live within reach of Northern Wisconsin—or Minnesota—you can enjoy perhaps the finest mixed fishing to be found anywhere. The large-mouth bass and perch-pike ("wall-eye") are almost omnipresent in the lakes of this region and in the deeper waters—especially with rocky or gravelly bottom—the king of them all, the small-mouth black bass, strikes freely from June to the end of September.

In some waters he may be taken with the fly. The best time so to capture him is in the evening, just before or just as the sun is setting. Try it in June and the early days of July. During most of the extremely hot weather (always then during the middle of the

A trail among the rhododendrons

Back into the wilds by rowboat and canoe

day) the "small mouth" seeks the depths and must be fished for with skill. For the benefit of my professional brethren I will reveal a method which has proven "a sure killer" in my own hands and which I have seen but one other man use.

Here it is: About nine inches from the end of a thin, neutral-tinted casting line, attach a six-foot "mist"-colored gut leader. To the free end of the *line* fasten a dipsey sinker. When the sinker is dropped, this will cause the leader to float about nine inches from the bottom. To the end of leader, and again two feet higher, loop on a single gut "sneck" bass hook. Bait with live minnows, hooked lightly through the nostril. The minnows swim around freely on the light and almost invisible leader and Mr. Bass strikes them hard—and often. The largest fish I have taken were caught on this rigging. Moreover, I have sat in my canoe and taken fifteen or twenty bass within an hour therewith while good fellows in three other canoes, each with two rods rigged ordinarily, and located within fifty feet of me, failed to net a single fin.

In the middle of the day during the hot months the big-mouth may be taken from the edge of bars and deep holes in precisely the same manner. At this time to cast into the reed pockets and about fallen timber and deadheads is almost useless. However, during June and again in September, as the water chills, casting to shore is *the* thing, and personally I would sooner take two bass on long casts out of a tree-top than ten by deep fishing.

Without any question the best bait under such circumstances is the small, live frog. Next in killing efficacy comes the lively *mud-minnow*, and, failing these, a properly cut pork-rind. After ten years' experience I have about decided that in most of the Wisconsin lakes the artificial minnow is more or less "N. G." Sometimes, when the bass are taking pretty nearly anything, the "gun-boats" will fetch a strike, but ordinarily one may thresh the waters for hours without response. I do not mean by this that one style of minnow will fail and another succeed. In the waters I have fished—and which I fish each year—few artificial lures are used and these are cast by beginners or old hands "trying out a new one" or confirming once more their belief that the "wood-blocks" don't catch fish.

On dark days and when trolling along the edge of the lake a small spoon and bucktail will work nicely but you are just as likely to pick up pickerel as bass. Most of us eschew these fellows, though in the Gogebec and adjacent waters the pickerel are extremely savage fighters and make an acceptable chowder later.

Doctor Candler and his 38-pound muskie

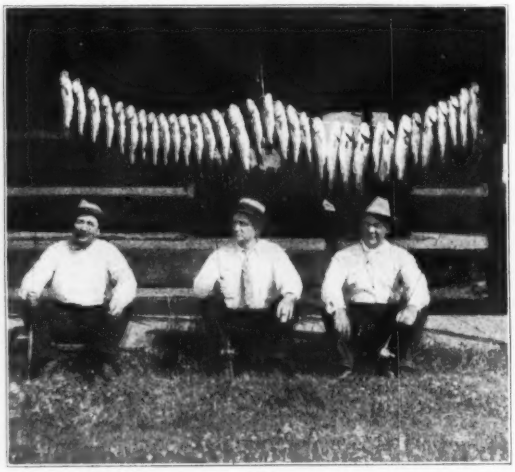
The great northern pike is not particularly plentiful in the Wisconsin waters but some fine specimens are taken each year. In the less-fished water muskies are still abundant and few lakes on the right side of the divide fail to yield one or two to the man who really fishes for them. Fishing for muskies, however, means hard work both for fisherman and guide. In the first place the rougher the water and the heavier the wind the better the fishing. If you troll, the boat must be kept going at a fair rate round and round the lake or selected bars. Hours will often pass and not a strike be secured. Then, just as vigilance relaxes and the grasp on the rod loosens, a thirty-pounder hits the spoon and the fight is on—to end, alas, only too often! just as suddenly as it began.

In some unaccountable manner the fish will manage to get the slack, or a line "guaranteed to hold any muskellunge" will snap like a thread when his majesty leaps into the air or bores for the bottom. If you do fish for muskies use a new line each day and have a twelve-inch piano-wire leader next your spoon.

If, however, you want real fishing stick to the bass, pike and trout. To find them is comparatively easy and the equipment is not expensive. At least it need not be, though, as the habit grows, the tackle box gets larger and the rods accumulate.

To begin the game all you require is a split-bamboo five-foot casting-rod (you can't well beat the Heddon, made at Dowagiac), a quadruple multiplying reel—you can spend from $4.00 to $50.00 on this as you feel disposed—a couple of good undressed silk casting-lines, and a few spinners, small spoon-hooks, bucktail and a dozen snelled bass and trout hooks with a supply of swivel sinkers, split shot, and other minor accessories. I would buy a Tri-part or Take-apart reel or (if there is money to spare) a Blue-grass Simplex. The beautiful Meeks, Talbots, and the like can come into your possession later. The Skinner spoon—single and with auxiliary hook—is standard, and the Hildebrandt baits—especially the Slim Eli with bucktail—are sure killers. Every sporting goods dealer has his favorite lines. The better grade, the Kingfisher, cannot, however, easily be beaten. Get a good collapsible net and a stringer. If you are going to camp, a minnow bucket is an essential. If you are at a resort they are supplied. For trout you will, of course, need small hooks and spinners or if you want to fly-fish you should have a fly-rod and a good supply of tied flies. Most of the streams, however, are small and so brush-covered as to make fly-fishing difficult.

Now—where to go? Get your ticket on the North-Western to Eagle River, Three Lakes, Conover, Watersmeet, Cisco, Gogebec, and you're sure of good fishing. At Eagle, Everett and half a dozen others will take care of you. At Cisco you'll find Charley Bent, or Lundberg of Tenderfoot Island. You can't miss it there. Indeed at either place you have the choice of a score of lakes and canoe trips



A real Wisconsin catch

of infinite charm and variety. Every fish that can be caught in the Wisconsin waters may be secured from these two centers. The accommodations are good and charges reasonable. Guides are ready to show the new man the ropes. Board ranges from $12.00 to $15.00 per week; a boat or canoe will cost you fifty cents each day; and a guide, if you want one, $2.00 to $2.50 per day. The first season it would be well, perhaps, to stay at and fish from a resort; later, when you know the waters, and country, you can fit out at the resort and camp first on one lake then on another. For that matter, it is possible to leave a resort each morning, fish during the day and make another resort in time for supper. Some extremely pleasant four-, five- or even seven-day trips can be made this way.

Our camp among the white birches

Hardships need not be endured; but have just as much roughing it as you desire. Wear your old clothes and if you intend really to fish take along a ducksback suit and a slicker. Shoe-packs are the most satisfactory footwear. Get good ones and wear heavy woolen socks in them. Fly dope is essential in June. Remember that smokable tobacco must be carried along and it is not a bad idea to stow away in your kit a few emergency remedies.

We stop for lunch

I shall be glad to hear from any reader of CLINICAL MEDICINE who feels disposed to make a fishing trip and would like to be put "absolutely next" to the best thing going. I'm off for the identical spot tomorrow. Or, if you feel disposed, drop a line to Bob Thurston, Dam Lake, Eagle River, and see what he has to offer.

A TRIP TO SOUTH AMERICA

By S. Austin Davis, M. D., Brooklyn, N. Y.
Surgeon of the Steamship Vauban, Lamport and Holt Line

GET out your atlas or globe and turn to the map of the American continent. Now draw a line from New York southeasterly to Cape St. Roque, the most easterly point of South America, continue the line along the coast of Brazil, touching at Bahia, Rio de Janeiro and Santos, ending at Buenos Aires, capital of Argentine, and you have a base line on which to plan "a doctor's vacation."

This route is chosen since we have been over the course many times and know its attractions and advantages. Being away from the beaten track of the globe trotter from America, though well traveled by Europeans, it offers the fascination of countless novel sights and experiences. Properly to consider these last would require more

space than that between the covers of CLINICAL MEDICINE.

The doctor in need of rest of body and mind gets it on this voyage. He cannot well avoid it, on a voyage of twenty-three days, under the favorable conditions of weather and sea that usually prevail, surrounded as he will be with every comfort and luxury, even, that is to be had in well-equipped hotels. The fear of sea-sickness, the black beast which deters so many from undertaking a sea voyage, in our experience with this route, is more imagination than reality. From start to finish life is entirely spent on deck, and out of doors. For those of active disposition, there is provided a variety of deck sports, there is a well-found gymnasium, besides music and dancing, which latter are regular features every evening.

It may interest some to know that approaching the Equator is not synonymous with a great increase of temperature. The following tablet of observations will give a good idea of the prevailing conditions.

DAILY NOON RECORD FROM THREE DAYS NORTH OF EQUATOR TO THREE DAYS SOUTH

	Aver. Temp.
1911—Sept. 29 — Oct. 3	82°
Nov. 25 — Nov. 30	82°
1912—Jan. 1 — Jan. 5	82°
Feb. 22 — Feb. 27	79°
Mar. 30 — Apr. 6	83°
May 24 — May 29	87°
June 30 — July 4	80°
Aug. 21 — Aug. 25	84°
Sept. 28 — Oct. 2	82°
Nov. 21 — Nov. 26	83°
Dec. 24 — Dec. 29	82°
1913—Feb. 5 — Feb. 10	84°
Mar. 18 — Mar. 22	81°
Apr. 28 — May 2	85°
May 27 — May 31	85°
July 8 — July 12	86.5°
Sept. 29 — Oct. 4	81.5°
Nov. 9 — Nov. 13	82°

Lowest temperature recorded, 75° F.
Highest temperature recorded, 93° F.

It will be desirable to have a generous outfit of summer apparel on the voyage as well as sufficient preparation for winter cold, should the traveler contemplate proceeding around Cape Horn or across the Andes. And while deciding what to take along don't leave your camera where the Dutch skipper left his compass, that is, at home. An endless procession of snap-shots that you certainly "must have," if only to protect your reputation for truth-telling, will pop into view, and these never can be had from the photo-vendors.

The "best time" to make the trip is whenever it best agrees with your convenience and circumstances, remembering that south of the equator seasonal conditions obtain the opposite of those at the north in equal latitudes. The climate of Buenos Aires, for example, is much like that of New Orleans.

What is one to see on this excursion? Proper satisfaction of this question might mean an octavo volume, such as that lately published by Miss Annie Peck. The first anchorage is off the oldest and one of the most picturesque settlements in Brazil, Bahia, where unaccustomed sights will give the

A park scene near Santos

camera plenty of exercise. The stay of a few hours gives plenty of opportunity for a rapid glance at life in an antique-modern Portuguese town. Here, as in every other port touched, transportation facilities are up to date and of moderate cost.

The harbor and city of Rio de Janeiro are two days farther south and many have been the attempts to make competent and satisfactory word-pictures of them. The best anyone has done, is to call Rio "the most beautiful city in the world," and it can be safely left with that description.

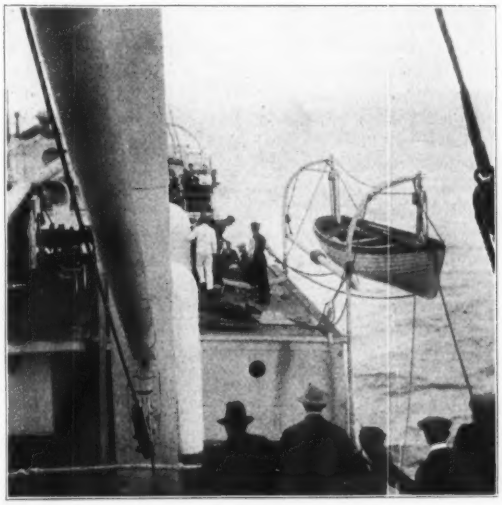
A few hours after leaving the great harbor of Rio, and its distinguishing feature, the Sugar-Loaf, we enter, between rocky hills, a narrow S-shaped canal that soon conducts us to a little town built on a filled-in swamp. This is Santos, the port from which is ex-

ported such enormous quantities of pure "Mocha" and "Java." It is also the port of entrance to Sao Paulo, a city of size and importance, some two hours away up in the hills, near which all this genuine "Mocha" and "Java" coffee is grown.

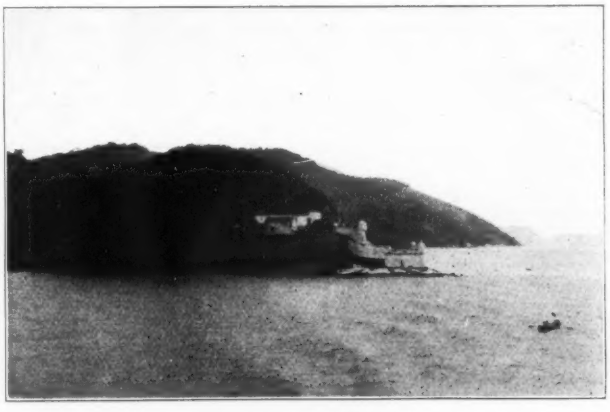
From Santos a stretch of three days brings us to the entrance to the River Plate, whose mouth is some 125 miles wide, and to the harbor of Montevideo, capital of the Republic of Uruguay. This is a busy and progressive modern city, and, like its neighbor Buenos Aires, ten hours distant, it is decidedly tinctured with foreign influence. The latter city, in point of importance, wealth, and application of advanced ideas, is well to the front. It bears, indeed, the modest title, "Paris of America."

Buenos Aires is "some town." Sunday is its chief day, and its show place is the hippodrome, or race-track. Here is a dazzling exhibition of Argentine beauty and wealth, that may well rival any similar congregation on the European continent. At this important social function Colonel Roosevelt met the chief representatives of the government. During the last fiscal year the Jockey Club Racing Association netted five million dollars.

From this sorry skeleton of a sketch many important places are missing for want of space. The homeward trip may be made in several directions, to taste, the Lamport and Holt Steamship Company having made arrangements with other connecting lines to this end. For example, we may return *via* the straits of Magellan or across the Andes to Valparaiso during mid-winter (the northern one); thence to Panama. Or we may go by way of England. Or we may return up the coast, bending to the westward at Cape St. Roque, touching at Trinidad and Barbadoes, and coasting along the Windward Islands. The fascinating beauties of these islands are to be seen but have not been adequately described.



A rescue from the sea. Group around rescued man.



Old Portugese fortress at Santos

MY SIX-THOUSAND-MILE OCEAN TRIP

By C. E. Witham, M. D., Lawrence, Kansas

WHEN worn and jaded by the ills of humanity, take a vacation, and, if possible, see other lands and other people. Most of the world is aqueous, so sail the oceans. The man who sees but the land knows only a little of the world. Take a six-thousand-mile vacation like mine.

From the crest of Telegraph Hill, in San Francisco, we look down upon the bay, forty miles long and five to twelve miles wide, where all the navies of the world might ride securely together. The Golden Gate, five miles long and one mile wide, is the only inlet from the Pacific Ocean. During July and August the city is enveloped in fog from 10 a. m. to 4 p. m., making

a semi-night of the day. The fog comes in through the Golden Gate like a perpendicular wall. Look! See that vessel! As it seeks an exit to the ocean, it strikes the fog-wall and is as instantly lost to view as though it had gone to the bottom of the sea.

Before starting on our trip let us take a look at Chinatown. Here we may learn what otherwise would cost us a visit to China. Our observations, in its theater, subterranean gambling and opium-smoking hells, and its unique shows, would not look well in print. So let us go to the temple and see the idols. Entering we find on the right a doctor's office where herbs and roots are weighed out in wooden balances. Then we turn to the left, to the priest's office. We are received in a most cordial manner. The priest made us a cup of tea without sugar or cream, in a vessel about three times as large as a ladies' thimble. We found it the most palatable we had ever tasted.

This office was a storehouse of Chinese curios. The priest made us several presents, and we bought joss sticks from him. Passing on, we found ourselves in the presence of the huge, ugly painted idols, and their kneeling worshippers, with hats on! In one room several kinds of food were spread out before the wooden gods. A missionary told me that after a while the worshipers would return and themselves eat the remnants left by the gods!

Passing out by the priest's office, we learned more of this style of worship. On the floor lay a large club and near by was a bell. The worshiper would purchase a prayer on a piece of paper which (after striking the bell with the club, to notify the invisible deity) he thrust into an oven to be burned and thus ascend to his gods!

We are on board an ocean steamer and after plunging into the wall of fog and passing through the Golden Gate, we find ourselves on the Pacific, the prow of our ship turned southward. Our crew consists of Chinamen on their first voyage. At the dining table, twelve languages are spoken, representing people from a good part of the world. In giving our orders, the Chinaman would repeat the words until he had them correct, and we always got what we ordered. A six-foot Chinaman, who appeared to understand our twelve languages, acted as interpreter.

For weeks we passed through all kinds of experiences. One morning, after a stormy night, we saw four large waterspouts. They are seldom seen, and generally not more than one at a time. One day we passed a becalmed ship; it was out of coal, and there was no wind for its sails. We gave the captain charts and maps. The vessel was returning from a voyage of discovery in South America.

At night we gazed upon the constellation of the Southern Cross, only seen within the tropics. These stars are colored suns; some of them double. Their planets cannot be seen, but we know that it is the legitimate business of suns to have worlds upon which to shine, so they must have theirs. The double-colored suns illuminate their worlds with different colored light. Think of a day of blue shading and blending with a day of green! Such are some of the unseen glories of the Universe.

At one port in Central America the natives (all minus clothing excepting a breech cloth) rowed out to greet us and dispose of their tropical fruit. We drew the fruit up by a line and paid for it by throwing silver coin into the water for them to dive after. They always returned with the coin. Their expertness amused us more than their fruit pleased our palates.

One of our passengers was a dog about twelve years old. It had always been on ship-board and was an expert in many ways; he could climb a mast and do other sailor jobs. He was a pet on board and appreciated caressing. His owner, a sea captain, was taking him to Boston as a superannuated pet. One day I missed him and was told by his owner that he had thrown the dog overboard because he could not execute his former exploits. I can never forget the sailor dog. His fate was an illustration of the fact that man's gratitude is less to be relied upon than that of a dog. We had one passenger-dog which came aboard at 'Frisco to bid adieu to departing friends and failed to leave the ship in time. She too became a pet and gained notoriety and showed good breeding by hunting up a spittoon in which to vomit when seasick!

One of our most interesting ports was Acapulco in Mexico—a city of paved streets, but without carriages, as far as I could see or learn. Mountains go up high on all sides, and the entrance to the harbor is between overlapping ranges. It is one of the hottest places in the world. At the south end of the city stands a banyan tree, which is calculated to excite admiration. Its branches spread out, turn down and take root in the ground, and then sprout up, each one making another tree! Think of such a grove of trees, with but one parent root.

Nearby on a hill stands the ruins of a temple destroyed by an earthquake. At the foot

of the hill is a new structure taking the place of the ruined one. The door being open, I went in. It is the custom in Catholic countries to have open doors at their churches and temples. I found a casket containing a representation of a corpse. On its head was a crown of thorns. On stated occasions, this casket is borne upon the shoulders of men through the streets at the head of a procession.

But let us visit the old fort. When the French were here they bombarded it on the ocean side. The Mexicans retired to the mountains and bombarded it on the land side. No repairs had been made on the land side where the walls had been shattered and the cannon which had been displaced still remained, leaning against the wall. At the entrance I found the guard asleep and took the risk of passing in. Nearing the center, I was halted by an inner guard and turned back after a pleasant conversation with him, and got past the outer sleeping guard without wakening him. I passed a sidewalk merchant who had his goods displayed on the walk. He had fallen asleep, and I could have purchased at my own price, but passed on.

Acapulco has a unique municipal waterworks system. In the center of the city there is a large deep well with a street graded down to the water. The native women fill their gallon jars and place them on their heads so well balanced as not to need support, and march through the streets to their houses! The city also has a unique public laundry system. The people go to the shore of the bay, bathe themselves and their clothing and hang it on the bushes and bask about naked until their clothing is dry! I cannot say that this is a universal custom.

After three weeks of ocean voyage we stand on the seawall of the city of Panama. When the king of Spain was informed of the cost of the wall, he asked if it was made of gold. Looking five miles down the bay we see the ruins of old Panama. In its day it was, perhaps, the richest city in the world. It gained its wealth by the plunder of Peru. It reaped retribution when it was sacked and burned by Henry Morgan, the buccaneer, in 1670. It would be interesting to take you there, but space forbids. We left the Canal Zone with twelve million Mexican dollars on board, $3000 in a box. This treasure was guarded night and day by armed men.

With glass in hand, we stand on the deck of the Rising Star, plowing the Caribbean Sea. In the far distance we dimply discern a cloud-like something, the size of a man's hand. It grows until we can see it to be the smoke of an approaching steamer. It proves to be the ship Bienville, bound for Colon. We gazed at its passengers as they stood on deck, and exchanged papers and greetings. How little did we anticipate the immediate fate of the ship; at twelve o'clock that night the Bienville burned, exploded, and went to the bottom!

Passing other events of interest, let us go to Jamaica, and note "The Sunken City in the Sea—Port Royal."

One of the most interesting spots the vacation-trotter may visit is the city of Kingston, Jamaica. The natives are mostly blacks, formerly slaves. They build sidewalks with a cross-wall at each end in front of their homes. The black woman on the street cries: "Ginger beer, ice-cold ginger beer, ten cents a drink!"

We order a drink, and then another, when she changes her song to: "Two drinks for a quarter"—her wholesale rate!

We pay a bright American quarter and pass on. We are arrested by the cry: "Stop, Sam!" She presents the quarter and shakes her head. She wants a Spanish quarter. The exchange is made with an old worn coin.

Everywhere we are hailed by such cries as these: "Sam, buy this."

"Come, my honey, and buy."

Then, "How is Uncle Sam?"

In Jamaica it is a rare thing to find a person able to tell who his father is. This is the statement of a missionary.

In passing over the city, we find the corners of the streets protected by old iron cannon placed endwise in the ground. In their day they belched forth their murderous fire for the buccaneers. But when the nations combined to exterminate the pirates the captured vessels were brought here. So now the cannons are rendering a peaceful service.

Entering the harbor of Kingston, we pass to the left of a floating buoy which is anchored to the spire of a church. In 1692 Port Royal went down in an earthquake, carrying twelve thousand inhabitants to the bottom of the sea. On a clear day, when the surface is placid, one may see something of the buildings under the sea. Poe's description is apropos:

Here death has sunk himself a throne,
In a strange city,—submerged, alone,
There spires and palaces rest, and towers,
Slimy, coral-crested—all unlike ours.
No cheerful rays from heaven ever come down,
On the long night-time of that fated town;
Only ghostlight, from out the lurid sea,
Streams up the pinnacles, far and free;
Up domes, up spires, up weird halls,
Up fanes, up looming walls.

I fancied the obsequies of the dead city. Our ship lay moored at night in Kingston harbor. The winds were asleep, the sea placid, and the moon burnished a shining silvery path over the water. On a neighboring ship a band was playing enchanting music. I fancied the strains were funeral dirges, and the silvery moonshine burnishing the water to be the winding shroud of the sunken city.

A little of the geology of Jamaica will help us to understand how its cities easily slide into the sea. The island was born a mountain. Ages of tropical rains brought the detritus down, forming the plains on which the cities are built. Naturally, an earthquake shock causes these deposits to slide. So the recent earthquakes have caused Port Royal to sink further.

Thirty eventful days, from the Golden Gate to Sandy Hook, and only partly told. By it we have gained an enlarged view of humanity, a more exalted appreciation of our own country—and added ten years to our mundane life.

Epicorneascleritis

By FLAVEL B. TIFFANY, Kansas City

EPICORNEASCLERITIS would be an appropriate name for a pathological condition of the cornea extending to the sclera, in which there is a dense neoplasm with more or less vascularity; but it is neither a simple, superficial keratitis, nor is it a simple pannus, episcleritis, symblepharon or pterygium. It is a combination of most, and in many cases of all, of these conditions. The epithelial layer embracing Bowman's membrane is hypertrophied, opaque, and oftentimes traversed by blood-vessels.

These pathological conditions are usually the result of a long-standing, chronic inflammation having its origin primarily in the epithelium of the cornea and ocular conjunctiva. The palpebral portion of the conjunctiva may be entirely free. Vernal catarrh and episcleritis are among the most frequent forerunners of these complications. Pannus crassus may have existed for a long time, with Bowman's membrane so vascular as to give the cornea the appearance of a piece of raw beef. Later on this vascular pseudomembrane clears up, assuming the form of pannus tenuae. The blood-vessels have become attenuated and the membrane is thick and only partially transparent.

In some cases, there is great photophobia, the patient not being able to tolerate a ray of light; in other cases, the cornea has lost in large measure its sensibility and is more tolerant than the normal cornea of light or of irritating foreign substances. Patients in whom the disease has advanced to this stage usually have suffered long and submitted to all kinds of treatment, but to little purpose. Frequently it is only when they have become nearly blind and scarcely can grope their way about that they seek the specialist's advice and treatment. And then even the expert may be unable to help them.

Let me cite a case. A farmer suffering from conditions such as I have outlined consulted me a few weeks ago. He represents only one of the many such patients that visit our office annually. The treatment I have employed has given good results.

In old chronic cases having the hypertrophied pseudomembrane anterior to the epithelial layer, I make an extended syndectomy. I say "extended," for I remove the greater portion of the hypertrophied, opaque pseudomembrane of the cornea. Ordinarily in making syndectomy we make an incision through the conjunctiva and subconjunctiva down to the sclera, and then dissect up this band and cut it off at the limbus, girdling the eye, as it were, and cutting off all the blood-vessels to the cornea. In complicated cases, I do not stop at the limbus, but dissect or shave away the epithelial layer down to Bowman's membrane.

In the case under consideration, there was in the right eye some symblepharon, a band extending from the palpebral conjunctiva even on to the cornea. This I dissected loose from the cornea, tucking it back into the retrotarsal fold. On the left eye I not only made a syndectomy but removed all, or nearly all, of the epithelial layer of the cornea down to Bowman's membrane. This cleared the cornea so much as to bring the pupil into view, and the vision became perceptibly improved. The cornea continued to clear, and up to the present writing the vision is fully as good as was that of the right eye when the patient came to our office. There was no conicity or staphyloma of the cornea following the operation.

What Others are Doing

PERCUTANEOUS APPLICATION OF DRUGS

With a view to obtaining the benefits of drug treatment without taxing the digestive apparatus, Fischel and Schoenwald (*Med. Klin.*, 1914, No. 5, p. 197) have used, in the form of percutaneous application (inunction), a preparation called sputolysin. They tried it in 67 cases of pulmonary tuberculosis, obtaining positive results in 66 of these patients; they report their experiences in the *Medizinische Klinik*.

Sputolysin is a complex mixture of the following formula:

Antimony and potassium tartrate	0.03
Extract of belladonna	0.10
Balsam of Peru	1.0
Oil of turpentine	1.0
Potassium iodide	0.5
Guaiacum	2.5
Camphor	3.0
Liquid paraffin	5.0
Soft soap	7.5
Lanolin	17.5

Divide into 6 equal portions.

One application is to be made daily, in a different place each time. On the seventh day a cleansing bath is ordered. After a rest of one or two days, repeat the six-days' course of treatment.

The author reports a prompt and beneficial effect on cough, expectoration, pain, and fever. The appetite was improved in consequence, and the general condition of the patients ameliorated.

SPRUE TREATED WITH EMETINE HYDROCHLORIDE

In 1907 Cantlie advocated the use of ipecac in the treatment of sprue, a well-known form of tropical diarrhea associated with sore mouth. Now Schmitter reports his experience with six cases of the disease treated with emetine. The first suggestion as to its value in these cases came from Ashburn, who treated a patient suffering both from sprue and amebic dysentery. Not only did the entameba disappear from the stools, but the sprue symptoms improved under the same treatment.

In all of the six cases of sprue reported by Schmitter (*Milit. Surg.*, Apr., p. 330), there was improvement; the mouth ulcers were decidedly better in twenty-four hours, and in some cases there was complete healing within forty-eight hours. All of these patients also complained of a feeling of tension across the upper abdomen, but this symptom was generally relieved soon after the emetine treatment was begun.

EMETINE IN HEMOPTYSIS

In preced'ng issues of CLINICAL MEDICINE we have called attention to the remarkable results following the hypodermic administration of emetine in hemoptysis. Not only have the French authors pointed out that the drug frequently stops bleeding from the lungs almost instantaneously, but it has been tried by one of our own correspondents, Dr. C. S. Cope, of Detroit, and with brilliant success in one very severe case. Another, similar, case was reported by Aubert and Bouyer, in the *Journal de Medecine de Bordeaux* for January 18.

The patient was a young woman, sixteen years of age, who two years before had suffered from nasopharyngeal diphtheria, complicated with bronchopneumonia. She had two recurrences, associated with anginal paralysis and bronchopneumonia. The latter complication left behind a hemorrhagic disease of the lungs, which had persisted for two years. There was a bloody, purulent, odorless expectoration, from time to time occurring in paroxysms. On one occasion she lost two liters of blood in four hours. The bacillus of Loeffler had persisted for eighteen months in the throat and nose, and this was associated in the sputum with streptococci and staphylococci, and sometimes pneumococci. However, there was no fever, and her general condition was good.

All the usual hemostatic drugs had been employed, without success. Emetine was then administered, with the following results:

The expectoration continued, being now grayish-green colored, but becoming again chocolate-colored after the medication had ceased; the paroxysms of hemorrhage, however, were arrested with each injection. During one access of the hemoptysis, when there was a loss of two liters of blood, emetine was given; and in this instance it proved providentially efficacious. The drug was administered for a month, and produced no toxic symptoms and no habituation. In what manner this drug acts in cases like this, the authors are unable to explain.

Evidence continues to accumulate to prove the great value of emetine injections in arresting hemorrhages from the lung—and also from from other localities.

TECHNIC OF ANTITYPHOID VACCINATION

In view of the interest now taken in typhoid prophylaxis, the technic of the vaccination must be of interest to every physician. F. W. Foxworthy, writing in *The Military Surgeon* for April, gives the following concise directions:

"The medical officer, with sleeves rolled up to the elbow, nails carefully manicured, must have his hands thoroughly cleansed by the use of brush, soap and hot water, and then soak his hands in a 1 : 1000 bichloride or equivalent solution; with the left sleeve of each applicant rolled to the shoulder, the assistant paints with iodine a spot a little larger than a silver dollar on the posterior part of the middle third of the arm.

"The surgeon, after thorough sterilization, takes the three-cornered file, which has been boiled with the needles and syringe in a 2-percent soda solution, and files off the neck of the tube containing the vaccine. Usually a slight nick in the neck of the tube is sufficient to break off the top of it. These tubes have previously been submerged in a small receptacle filled with alcohol. For the first dose 1-2 cubic centimeter is drawn into the syringe, care being taken that no air bubbles remain. For the second and third dose, 1 cubic centimeter is drawn into the syringe.

"Grasping the arm firmly so as to pull up the skin lightly over the spot painted with iodine, the hypodermic needle is introduced subcutaneously. This must not be into the muscular tissue nor into the skin alone. The sleeve is to remain rolled up until the spot has dried. The needle is then unscrewed and put back into the boiling solution in the sterilizer and another needle is taken out of the solution with the small forceps and attached to the syringe. If care be used, it is unnecessary for the fingers of the surgeon to touch the spot of the injection or to attach the needle to the syringe, which can be done with the forceps."

ANTISEPTIC VARNISH FOR SURGEONS: MASTISOL, STERESOL

In our February number (p. 155), mention was made of a bactericide varnish—*steresol*—composed of Peru balsam, acetic acid, castor-oil, and alcohol; this to serve surgeons in lieu of rubber gloves when operating or in gynecologic work.

We now happen across another formula of a similar nature, and claimed to yield a preparation giving fully as good satisfaction as a certain German proprietary marketed under the name of *mastisol*. This combination was developed by Doctor Borchardt (*Bruns Beitr. z. Chir.*, Bd. 87, No. 2), who had been using the mastisol (but found it rather costly), and is as follows: Finest mastic, Gm. 40; purest benzol, Gm. 60; castor-oil, gtt. 20. Dissolve, let stand, then filter. (Do not confuse benzol with benzin!)

This varnish markedly inhibits the development of strepto- and staphylococci. If the brush with which it is laid on becomes infected, it can be sterilized by immersing it in the liquid for an hour. This varnish, the author suggests, should be carried in the surgical bag. It may be strengthened by adding 3 to 6 percent of iodine. In case of ablations, the varnish may be applied after painting the field with iodine.

INFLUENCE OF SMOKING UPON THE BLOOD-VESSELS

With the aid of an ingeniously constructed apparatus closely permitting a fair imitation of the conditions of smoking by men, H. Schmiedel, of the Pathologic Institute of Bruenn (Austria), has been conducting experiments with rabbits, with a view to ascertaining what effect tobacco smoke has upon the vascular system.

Without exception, the animals (adequately controlled) were found (*Frankf. Zeit. f. Path.*; cf. *Muench. Med. Woch.*, 1913, p. 1679) to have acquired alteration of the tunica media of the aorta, this lesion exhibiting considerable similarity with the corresponding

necrosis in man. All question as to this condition being caused by elements in the smoke was eliminated.

THE TREATMENT OF SCIATICA

The first indication in the treatment of sciatica is rest—so declares F. X. Dercum, in *The Therapeutic Gazette* for April, p. 239. Sometimes rest in bed is sufficient; at other times it is necessary to place the limb in a splint. Next in value to rest is a course of sodium salicylate, which, though, must be given in full doses; and it is Doctor Dercum's custom to combine it with sodium bromide, 10 to 20 grains of the former and 20 to 30 grains of the latter, given every four hours. If these drugs are well diluted, these rather large doses will be well borne by the stomach.

It is important to make massive impression with the salicylate within the first twenty-four to forty-eight hours, after which the dosage of the salicylate and the bromide may be rapidly diminished. In very severe cases, Doctor Dercum relieves the pain by means of the hypodermic injection of morphine and scopolamine (hyoscine).

THE ALKALOIDS OF QUEBRACHO

Quebracho contains at least five alkaloids—quebrachine, aspidospermine, quebrachamine, aspidospamine, and hypoquebrachine. The first four have been carefully tested pharmacologically by Douglas Cow, who reports his findings in the March number of *The Journal of Pharmacology and Experimental Therapeutics*. His investigations were carried out on rabbits, cats, dogs, and frogs, and some very interesting data were accumulated.

First of all, Doctor Cow was able to determine that all these alkaloids, when given in small doses (1 to 2 milligrams) increased the depth of respiratory movements as well as the rate of respiration. Quebrachine is the most powerfully toxic of the group, aspidospermine being only slightly less poisonous as regards respiratory action, while quebrachamine and aspidospamine are found to be much less poisonous. The general action of aspidospermine and of quebrachine is much alike. Both of these drugs very decidedly augment the depth of the respiratory movements. The effect on the rate is much less marked, but the tendency is to quicken it. The two weaker alkaloids, while they increase the depth of respiration, rarely influence the rate in any appreciable degree.

All of the quebracho alkaloids slow the frog's heart and reduce its tonus and the strength of its beat. The rhythm is not disturbed unless very large doses are employed. The action is much the same on the hearts of mammals, all four of the alkaloids slowing it and diminishing the strength of its beat. Aspidospamine is an exception with regard to the influence upon the tonus, which it very slightly increases. The rhythm is likely to be disturbed, whichever alkaloid be used. The order of cardiac toxicity of the four alkaloids is the same as for their respiratory toxicity. The action upon the blood-vessels, it was observed, was to constringe them slightly; this being most decided in the case of aspidospermine, and least with quebrachamine—indeed, not infrequently the latter had no such effect.

In small doses, quebrachine exerts a stimulant action on the central nervous system; and in this respect the other four alkaloids resemble it, although their action is weaker. In large doses, paralysis of the nerve-cells is produced, while in still larger doses paralysis of the vagus and the sympathetic nerves and of the motor nerve-endings may follow. In overdosage, quebrachine causes death by paralyzing the respiratory centers at a time when the motor nerves still are responsive to electrical stimulation.

AMEBIC DYSENTERY OF THIRTEEN YEARS' DURATION CURED WITH EMETINE

Another illustration of the fact that amebic dysentery is not extremely rare in this latitude is shown by the experience of T. W. McCaskey (*Jour. Amer. Med. Assn.*, Feb. 14, 1914, p. 534), who has treated one suc case in a patient who had never been south of the Ohio River. Another case, which he describes in full, occurred in a woman of seventy, who thirteen years ago contracted acute dysentery while living in Tennessee. Since that time the trouble persisted. In the entire thirteen years she had passed not one single formed stool.

This old lady entered the hospital on September 8, 1913, and on the same day she received an injection of 2-3 grain of emetine hydrochloride. This caused mild nausea. The next day 1 grain was given, and this was followed by a more decided nausea, besides some abdominal distress. September 10 another grain of the alkaloid was injected, after which three days were allowed to elapse

before giving the next injection. On September 13 no amebas were found in the stool, but another grain of emetine was administered. After this, no more emetine was given for a considerable period, although on the 16th the patient had only three stools in twenty-four hours, the last of these being formed—the first, as already stated, within thirteen years.

By the 19th, the woman was feeling perfectly well, except that normal appetite had not returned. However, on the 23d of September, the diarrhea recurred and amebæ again were found in the stools. Meanwhile she had left the hopsital; but on September 30 she returned for treatment, and emetine was given for five consecutive days—2-3 of a grain daily for the first two days, and 1 grain a day for the next three. On October 8 another grain of the drug was administered, then 1 1-3 grain on the 13th, and 1 grain on the 17th. By this time she apparently was entirely cured.

An interesting feature of this case was the nausea and the abdominal distress induced by the injection. Doctor McCaskey is of the opinion that this was due, not so much to the direct pharmacologic action of the emetine, but, rather, to its specific action upon the myriads of amebas with which the intestinal wall undoubtedly was infiltrated. The liberation of the endogenous toxins from the killed parasites, he thinks, probably was responsible for the nausea, which in one instance came on rapidly fifty-six hours after a dose of the drug; and it scarcely is supposable, he remarks, that the action of this, or any other, remedy given hypodermically could be delayed so long.

PRACTICAL AND SUCCESSFUL TREATMENT FOR DIABETES

Some months ago a long article appeared in *The New York Medical Journal*, giving the remarkable experience of Doctor Beveridge of New York in the treatment of diabetes with the Bulgarian-bacillus tablets. More than 100 cases were reported, and relief was the rule, while in many cases sugar disappeared from the urine. Another important testimony to the value of this method of treatment comes from Dr. L. Napoleon Boston, who, in the April 25 issue of the same journal gives a report of 30 cases of diabetes, all private patients, treated by him between January 1 and September 15, 1913; these patients varying in age from 20 years to 60 years. All cases were well marked, 12 at least severe, and they showed an average loss of weight of 11 pounds. The percentage of sugar in the urine varied from less than 1 percent up to 5 percent. In only 13 did the quantity of sugar in the urine fall below 1 percent.

Treatment consisted in controlled diet, according to the usual plan; the use of codeine sulphate, oxgall, and pancreatic extract, as indicated (which suggests the well-known bilein and pancreatin compound with which many of our readers are familiar); but the special phase of the treatment which attracts our attention is the fact that Doctor Boston used the Bulgarian bacillus with success. Of the 30 cases, only 3, or 10 percent, failed to show improvement as a result of the method of treatment employed. In many of the cases the improvement was very marked. Fifteen cases are reported in detail. Of these cases, Nos. 3 and 7 are the only ones in which the sugar did not disappear entirely after treatment. Only 1 of these cases died.

On the whole, the method of treatment employed by Doctor Boston seems a very promising one. Certainly the routine use of Bulgarian bacilli in the treatment of diabetes seems to be fully warranted.

AS TO THE SERODIAGNOSIS OF EPILEPSY

After a brief survey of the several attempts at applying serology for diagnostic, prognostic, and therapeutic purposes as to epilepsy —organically based and constitutional-dynamic—all of which efforts failed to fulfil the expectations of their originators, W. Mayer (of the department of nervous diseases of the University of Tuebingen) relates the outcome of his own investigations in this direction.

His findings (*Muench. Med. Woch.*, 1914, No. 13) are entirely negative as to either absolute or differential diagnostic value of the ninhydrin tests or allied serologic methods; these conclusions being based upon accurate clinical observation of 37 undoubted cases embracing the various forms, duration, degrees, in both sexes, and covering all ages. The organs tested for were: cerebral cortex, testes, ovaries, thyroid gland, suprarenal capsules, liver, pancreas, and kidneys. All tests were concurrently controlled.

Miscellaneous Articles

The Doctor's Income—And a Talk On Ethics

SOME time ago you called for statements from men in the field as to the amount of their incomes and other financial data, so, now that 1913 is a thing of the past, I am going to give you my own experience. But, inasmuch as I am going into personal history, I shall ask that you withhold my name and location, as I have no desire to toot my own horn, while the lack of this information will in no manner lessen the point of my story.

To begin with, I am thirty-two years old, and in my seventh year of general practice in a town of 8000 people. Being unable to get a suite of offices such as I desired, I built, summer before last, adjoining my residence, and put about $700 into the structure, including hardwood floors, hot-water heating, gas, electricity, and toilet-room adjoining the office and waiting-room. I consider this one of the best investments I ever made.

In a general way, I have always known approximately what I earned in a year; however, last year I made the effort to "book" all my transactions, keeping cash accounts and credits separate, so that I might know exactly what each branch of the work paid me and thus be enabled to devote my energies to developing that branch which paid best. I know I have not entered everything I have done, for many items will slip the mind (such as bills paid on the street, etc., which I neglect to enter), so that what I have record of is safe and conservative.

There are six other physicians, besides one chiropractic, located here, one of whom calls himself a specialist in obstetrics. The remainder are all doing general work, except that one also does refraction-work and supplies the glasses himself.

About three years ago I announced through the press that I did not take confinement-work. This was because I found that this class of work was the poorest pay of any and took the most of my time, in actual hours, of any other class of work. I did not stick to this absolutely, but continued to care for my old patients who were "good"; it gave me an excuse, though, to dodge the deadbeats—which was my original purpose.

I do almost all my own dispensing, not because we have no good druggist, but because my patients like it and, moreover, it is more convenient. As a source of income, it is not particularly a money-getter; it does bring me much business, however. I carry between $150 and $200 worth of drugs, this including bottles, labels, tablet-boxes, and other needful accessories. I buy only the best goods obtainable. The drugs themselves I get from the manufacturers or jobbers in original packages. A man who buys cheap drugs, to be dispensed by himself, is fooling only himself, and no one else. Our reputation as doctors depends entirely upon the results we get, and, in the long run, the cheap, low-grade drugs give poor results.

Our surrounding country is not well settled. The roads are in bad shape and the settlers are poor—most of them homesteaders, who make their living from the sale of pulp-wood and pine timber, which they get out in the winter. Their clearings will not average over 10 acres, and most of this land is in hay.

We are about an hour and a half's ride away from a town of 85,000, that is well provided with "specialists" and hospital facilities. The competition there is keen and prices suffer in consequence. We have to take this into consideration in making our charges.

We have a hospital here of about 15 beds, maintained to care for contract-work. Curious as it may seem, the fewer patients the hospital houses, the better the institution pays. Private cases, you see, require more care and attention and, so, are not welcome; in fact, admittance has been denied so often that we do not attempt to use the hospital at all. But, to get back to the starting- point.

I find that last year I took in cash, from office calls only, $1669. This includes every-

thing I did in the office—examinations, microscopical work, uranalysis, dressings, nose-, throat- and ear-work, minor surgery, and electrical and x-ray treatments. My drug dispensing brought in $267 cash. Calls into the country and about town altogether totaled but $468. I had only 8 confinements during the year, and they footed $185. Surgical work outside the office brought in $1338. This included fractures and some work hard to classify, being both medical, surgical, in the office, and after-calls to homes, all told, $202.

This makes a total of $4129 of which I have record, and, of course, represents all cash. Besides this, I booked, as credit, $2773. This makes a total business of $6902 for the year's work.

Just a word in regard to the surgical item. I have performed more than 100 laparotomies during the past three and one-half years, most of them emergency-cases (gallstones, appendectomies, and hernias), and a large majority of the operations were done in the homes of the patients, who had no skilled nursing either before or afterward. I lost but one such patient, and this in a hospital. This one was *in extremis* when first seen, being a case of peritonitis from a ruptured appendiceal abscess, and I did a "stab-and-drainage."

This record, I dare say, will compare very favorably with work done in big centers, considering the class of cases handled; and, to forestall any questions as to technic (aseptic), we had not to exceed 5 cases of mild stitch-infection in the whole series where no drainage was provided.

This will show that it is not necessary to send your best-paying class of cases away to someone who will knife you and tell your patient that "if he had come to 'the expert' sooner it would be an easy case, but now he was almost too far gone and the outcome was doubtful." When the patient recovers, as he nearly always does, a feather is added to the "expert's" cap and a nice $50 to the patient's bill.

I do not know how this showing compares with what other men are doing who are similarly situated. Someone has shown that the average income of the physicians of the United States is somewhere around $500 to $600. To any M. D. who is making less than $3000 a year, and who is not a newcomer but has established himself in the community, I would say that he either has made a mistake in the choice of his profession or that he had better change locations.

We have saw-filers in our town who make from $15 to $20 a day; men who work six days a week (although sometimes seven), who have no education, and who cannot write their names legibly. We have sawyers in the mills making from $6 to $8 per day regularly, some of them only twenty-four years old, and these men without a common-school training.

I was earning $85 per month (this is $1020 per year), and having my board and room furnished besides, while I was working in the engineering department of a transcontinental railroad, and before I had studied medicine; and, if I could not do considerably better than that in the practice of medicine, I think I should quit and go back to railroading or anything else where a living could be made without "being on tap" twenty-three hours of the twenty-four, with no extra pay for "overtime."

I believe the time has come when socalled "medical ethics" should be uprooted and cast from us; as practiced, our ethics is a farce, a delusion and a snare—like the countryman's version of a giraffe, given while looking at it: "T' hell! there aint no such animal."

By this I do not mean that we should have no ethics—far from it—but what we have should approach the ideal more closely than we ever can hope to do. As a result, it is not followed, except on paper.

Why, pray, should we have a different code of ethics for the practice of medicine than we do for our everyday life outside of it? Why should a doctor be permitted to lie and to cheat his patient, as so often is done in consultation-work, and be perfectly ethical when we would not stand for it in other lines of work outside of the sick-room?

We place ourselves upon a high and lofty pedestal, then proceed to bamboozle the public into the belief that we are practicing our profession for the love of it, that money considerations are secondary, and all that nonsense; then at night, when we think we are not observed, we descend to the earth and wallow in the mud with the hoi-polloi in a mad orgy. When, however, we clamber back to our sublime roost, some of the mud sticks to us, and the observant public sees it; whereat many a wink and smirk at our expense. We can't fool 'em *all* the time.

We must not advertise. This is most unethical, of course, according to the Lights in the Profession; but, if we happen to belong to the College of Surgeons—about which there has so much been said of late—we may have our photographs taken in our ceremonial

gowns and caps, and have them published in the *Daily Print*, with a short reading notice, to the effect that "this is the picture of the eminent Dr. Foozlebug, who is one of the five or six men in this state who has been admitted to the College of A. S. for meritorious work," and that he took an oath—here go on to state that he would not condescend to advertise nor in any way place himself before the public other than in a legitimate manner and in accordance with our accepted code of ethics.

I am telling of an actual experience in our immediate vicinity.

Is this not enough to make the rank and file laugh in unholy glee? Let us get back to the Golden Rule, and practice it as much as lies in our power. It will keep us busy, and, while following its precepts, we cannot go far from the right. If a man is skilled in a certain line of work, let him acquaint his townsmen of the fact and keep within the bounds of truth. If he does not promise impossible things and keeps the promises he makes, wherein does he stultify himself or the profession?

I myself do not advertise in any way, shape or manner, except in an occasional article in a medical journal, such as this one; still, I am seriously considering doing so, with the full knowledge of what will follow. I shall be dropped from my county medical society and automatically from the state society (I am secretary of one and delegate to the other); the holier-than-thou members of the profession will look at me askance and refuse to consult with me. Nevertheless, I probably shall earn more money and do better work, in a vindictive effort to "show 'em."

I do not intend to write a book on this subject—that has been done very ably, and much better than I could hope to do, by Dr. C. Elton Blanchard, of Youngstown, Ohio. If you have not read it, do so, and be a better man for it. No, I do not know the doctor and have no interest in the sale of the book, except to pass a good thing along.

Having unburdened myself of a load that has been simmering for some time and was about ready to pop, it has occurred to me that perhaps someone else may have a few ideas along these lines, either in accord with or diametrically opposed to mine own. If so, I for one should be glad to hear from him. Conditions vary with locality, and the more widely separated areas that are heard from, the better the lesson taught. I am located in one of the north middle-western states, and this is sufficient for all purposes. A. B.

[This is a contribution to the subject of medical economics from a man who has evidently made a financial success of his work; and, as such, it has a distinct and positive value. We may not altogether agree with everything he says; in fact, we don't. There is always, on the part of financially successful men, a disposition to be rather impatient of the man who fails to make that kind of success; to say, in effect, Here am I, making so many thousands a year—if you can't or don't make as much, you're a fool; and to regard his less fortunate neighbor as a failure. Something of this inclination, if he will forgive my saying so, is apparent in the writer of this article. It must be admitted, however, that, in the main, his attitude is right, and what he says is true.

One point in his article, particularly, is worth emphasizing; and I am glad he has had the courageous egotism to assert it. The general practitioner can, in a great many instances, do his own surgery just as well as the city specialist can; and it is foolish of him to send every surgical case to the city surgeon. The practitioner has nobody but himself to blame for degenerating into a mere feeder for the big man; and he loses thereby all sorts of prestige and income. Of course, it needs some special preparation and equipment, but that is precisely the moral of the situation—the medical graduate should make a point of availing himself of all the opportunities in this direction with which a modern professional education surrounds him, so as to be in a position to take advantage of this feature of his practice.

The suggestion made by this contributor that others express their opinions and relate their experiences as frankly as he has done, is an excellent one. It is a subject that badly needs free ventilation. As I have intimated I could say a good deal on the other side of A. B.'s position, but I much prefer to leave it to others of the family to argue the opposing brief out of their own experience. You have the floor.

As to advertising, we have just three words to say—"Don't do it." It never was good ethics, and the time was never less opportune to try to make it so than right now. We are searching men's lives and criticizing their motives more today than ever before.—Ed.]

MISTAKES SOME PHYSICIANS MAKE

Here are a few of the practices of physicians that are objectionable or even detrimental, and which, insignificant though some of them

may be, in themselves, may be injurious to their best interests, and, consequently, should be abandoned. Of course, this list easily could be extended. I will enumerate:

1. Wrapping bottles and boxes of medicine in paper torn from medical journals or containing patent-medicine advertisements.

2. Giving medical advice free to several families at once when someone asks the physician over the party-telephone what is the best thing to do in this or that trouble. In this way the physician often gives advice to enemies who would not call upon him in case of sickness—knowledge that cost him years of hard study and thousands of dollars in money to obtain. These people pick it off the line, when the physician intended it to be of service to one of his friends and patrons.

3. Recommending solution of hydrogen dioxide, instead of prescribing some other antiseptic. The laity are wise on this point, and, as a result, the physicians lose several dollars a year in throat-disease cases alone. When the laity have throat trouble or a sore of any kind, they make for their peroxide bottle, which they bought at a bargain-counter for 10 cents a pint. Physicians have taught the laity this, without due compensation, and, as a result, each physician loses in this very way from five dollars to twenty-five dollars in the course of a year. The amount any one physician loses depends upon the extent of his practice.

4. A physician makes an unpardonable mistake by telling his patients what drugs he is using. I never have done it, and never shall. If they want to know, let them find out by taking the route we took.

5. Another mistake physicians make is in their failure to get together and adjust their fees in proportion to their expenses. Other professional and business men do this, then why don't physicians?

6. School-teachers now receive from ten to fifty dollars a month more than they did ten years ago, but physicians charge the same old measly fifty cents for diagnosis and medicine that they did ten years ago, and go from one to ten miles on a confinement case for a ten-dollar fee. (In some localities, though, this condition has been changed.) Fees for visits in villages and towns, and also stop-in visits in the country, were one dollar ten years ago, and they are the same today. Shame on us.

7. It is a mistake to let the laity determine the distance the doctor travels and to fix the fee, as is so often done. The average client only takes one thing into consideration, and that is, he wants the work done as cheaply as possible. He never takes into consideration the distance, weather, condition of roads, the time the doctor is called (whether by day or night), his responsibility, his exposure to contagious diseases, his boycott by others due to this exposure, and the many other factors entering into the value of his services that might be mentioned.

8. Our county medical societies, if they would, could do much for its members and the profession in general—but what do they do? What special advantage has it been to you to belong to your medical society? If it has done anything for you in a financial way, it is an exception, and not the rule. Unless a physician can be a benefit to the county medical society, or receive from it a benefit, why belong? Am I right or wrong? I am after information. Who will give it?

O. C. CHURCH.

Greenville, Ill.

DIARRHEA IN CHILDREN

Dr. E. H. Sholl, of Birmingham, Alabama, who has been engaged in the practice of medicine for fifty-eight years, gives a brief résumé of his method of treating diarrheas of childhood.

When the patients are breast-fed children, Doctor Sholl gives 1-4 grain of calomel every two hours for four doses, followed in four hours by a dose of castor-oil. The child is deprived of the breast for twenty-four hours, but is given barley-water and bismuth.

Bottle-fed babies are placed upon the same preliminary treatment, with barley-water and buttermilk if there is no change; also 1-100 grain of mercury bichloride every two hours while the patient is awake, this being continued, if necessary, to the point of salivation.

CHICAGO MEDICAL SOCIETY MEETING OF ALIENISTS AND NEUROLOGISTS

The Chicago Medical Society will hold its third annual meeting of alienists and neurologists of the United States, for the discussion of mental diseases in their various phases, July 14 to 18.

It is the object of the Society to have a scientific program, one that will be beneficial to every physician, whether connected with an asylum or sanitarium or in general practice. The meeting will be devoted to the discussion of the manifold causes of insanity and its prevention; also the conditions caus-

ing mental defectives. The criminologic aspects also will be considered. The public will be invited. Furthermore, suitable legislative measures are to be reported upon. A special committee will report on what constitutes a modern hospital or asylum, and what the duties of the State to physician who makes the care of the insane and mental defectives a specialty.

Arrangements have been made with the postgraduate schools of Chicago to give a complimentary course in all lines of work for the remaining days of July. This course will embrace internal medicine, surgery and special regional surgery, cystoscopy, radiology, brain pathology, vaccine making, the Wassermann test, and others. The superintendents and attending physicians are invited to avail themselves of this opportunity for the complimentary course. Tickets for admission to this course can be obtained from the Secretary during the meeting. All communications should be addressed to Dr. W. T. Mefford, 2159 West Madison Street.

AMERICAN ASSOCIATION OF PROGRESSIVE MEDICINE

We are informed that the third annual convention of the American Association of Progressive Medicine, a nonsectarian organization, will be held at the Planters Hotel, St. Louis, Missouri, September 8–11. Dr. H. R. Powell, well-known to the readers of this journal, is president of the Association.

THE TREATMENT OF MUCOUS COLITIS

In your editorial in the May issue you quote Dr. W. A. Evans: "Treatment of mucous colitis is most unsatisfactory." Will you kindly permit me to show that this statement is erroneous.

There are different theories in regard to the etiology of mucous colic, but none of them is plausible, except the atonia-theory.

Mucous colic is truly and positively one of the manifestations of atonia gastrica. Whether enteroptosia is the cause of mucous colic in all cases, has to be decided by further observation. Thus far some writers have paid attention to the coexistence of enteroptosia in cases of mucous colic; but this is all, none of them has thought of a relation between the two.

A positive fact is that the symptoms of mucous colic have disappeared, that permanent cures resulted after the abdominal plaster belt had been applied. Mucous colic was relieved by means of relieving enteroptosia.

When I spoke, on October 29, 1908, before the Philadelphia County Medical Society, of my experience in the treatment of mucous colic by means of the plaster belt, I added that I felt embarrassed to tell them, as a fact, how after application of the belt mucous colic was relieved promptly, completely, and permanently, fearing that I might be accused of exaggeration. Thereupon one of the members of the society rose and confirmed all the praise I had given, and proceeded to describe a case of eight years' standing in which a complete recovery had been obtained—exactly as I had mentioned—promptly, completely, and permanently, after the strapping.

Enteroptosia is very frequent and mucous colic is rare; but that does not exclude that mucous colic can be one of the many kinds of manifestations of enteroptosia. Enteroptosia in women does not always cause dysmenorrhoea, and in men and women not always colic; nevertheless, mucous colic as well as dysmenorrhoea may be caused by enteroptosia.

I beg to refer to my numerous publications on the subject.

What I have said here about mucous colic refers *eo ipso* to mucous colitis.

A. Rose.

New York, N. Y.

[In this article we follow Doctor Rose's spelling exactly, in accordance with his special request.—Ed.]

CALCIUM SULPHIDE AS A PROPHYLACTIC AGAINST SMALLPOX AND OTHER INFECTIONS

I wish to call the attention of the readers of your valuable journal to a few experiences I have had with calcium sulphide as a prophylactic in some contagious diseases and other conditions.

A few years ago I was called to a negro, whom I found with a well-developed smallpox. The sanitary conditions of the place were very bad. I immediately reported the case, by telephone, to the county health-officer. As it was in the winter and the roads were very bad, the latter requested me to look after the case for him. I knew it would be several days before I could get any vaccine virus, and that before I could do so the whole family probably would be sick with the disease; so, under the circumstances, I determined to give calcium sulphide a good trial.

There were seven persons in the family, including the sick man, all adults.

Calling again the following day, I gave them a supply of calcium-sulphide, ordering each of the well persons to take 1-grain doses every two hours the first day, and 1 grain every four hours during the day for a week thereafter. For the sick man, I prescribed 2-grain doses every two hours the first day. When I first saw the man, the pustules were beginning to form. On my second visit, the day when I began with the calcium sulphide, the pustules were beginning to "pit." When I paid my third visit, and the patient had taken the remedy for twenty-four hours, I found the disease arrested: all the pustules seemingly drying up. The man improved rapidly and recovered without further trouble. No other member of the family had the disease, although no other precautions or preventives were used.

Some time after this experience we had an epidemic of measles in my territory. Remembering my experience with the calcium sulphide in smallpox, I decided to try it in measles. In every case that I used it, the disease was aborted; furthermore, not a person whose system was saturated with calcium sulphide, regardless of the amount of exposure to contagion, contracted measles.

A little later I was called to a negro family in my town. Besides the husband and wife, there were three children, whose ages were seven, five, and three years; and the oldest,a a girl, had a well-developed case of diphtheria. False membrane had formed on the fauces.

I gave her a thorough purging with calomel and podophyllin; also ordered a throat-wash of a saturated solution of potassium chlorate and tincture of iron. I had some 1-4-grain calcium-sulphide tablets. As a prophylactic measure, I prescribed for the youngest child 1 tablet, 2 tablets for the next, and 3 tablets for the oldest; repeated every two hours the first day, then every four hours during the day for a week. When I called the next time, all false membrane in the throat of the sick child had disappeared. In the throat of the second child just a little redness was observed. The youngest one showed no symptoms of any kind. The disease made no further progress in either of the older children, while the youngest escaped entirely. These negroes lived in a one-room cabin, where they cooked, ate, and slept, the sanitary conditions being most undesirable.

During the winter of 1911 and 1912, we had an epidemic of whooping-cough in our town. It is needless to say here that in treating this disease I tried all the remedies that are recommended by the authorities. The remedy that gave me the most satisfactory results was calcium sulphide—*not* recommended by the authorities. I must confess, however, that I tried it in only two cases. The first was an infant 8 months old. As soon as the disease appeared, I put him on 1-4-grain doses of calcium sulphide every four hours during the day, besides instructing the mother to keep the baby's bowels open. The child was teething just then, and "cut" four teeth during the time. The patient was sick only about two weeks and lost one pound in weight.

The second case was that of a frail little girl about two years old. As soon as I learned she had been exposed to the disease, I put her on 1-4-grain calcium sulphide every four hours during the day. However, I first thoroughly unloaded the bowels with small doses of calomel and podophyllin given to effect. While the remedy did not prevent nor cure the disease, and the child had a moderate cough for four or five weeks, I feel sure the sulphide was beneficial, for her general health was not impaired in the least, while at no time did she have any paroxysms such as usually are seen.

I have a lady patron who (as she expresses it) "suffers death" from carsickness if she is on a train for four or five hours. Telling me this, she also said she had to make a trip of three or four days' duration, and wanted me, if possible, to give her something to prevent the attack. As an "inspiration," I gave her some 1-grain calcium-sulphide tablets, instructing her first to unload her bowels thoroughly, and on the day before expecting to start on her journey to begin taking one tablet every two hours during the day; then, after the first day, to take one every three hours during the day until she reached her destination. Also, to pursue the same course when she was ready to start for home. The woman was gone several weeks, and on her return told me that she did not have one symptom of carsickness while she was gone.

After this experiment, I felt a strong desire to test the remedy in seasickness. I have a gentleman friend (not a physician) who has large business interests in Santo Domingo and makes frequent trips from New York to that island. I mentioned to him my wish to test this remedy as a preventive of seasickness, and he kindly consented to aid me. He reported that in several instances [Fellow passengers?—ED.] very good results had been obtained. The most marked case was that

of a man past sixty years of age who had never been on an ocean voyage. My friend prevailed upon him to take a thorough purge and to begin on the day before sailing to take the calcium-sulphide tablets, 1 grain every two hours during the day, and then 1 grain every four hours for the next four days. While it took ten days to make the trip from New York to Santo Domingo, this man never missed a meal during the whole voyage.

Now, although "one swallow does not make a summer," surely such experiences entitle calcium sulphide to a trial in seasickness and allied disturbances. Not to forget, moreover, all the communicable diseases.

Friars Point, Miss. H. C. BUCK.

[Doctor Buck's experience is very interesting. As every old-time reader of CLINICAL MEDICINE knows, we have great faith in calcium sulphide. While it is not an infallible remedy, and fails at times, as other "sure cures" sometimes do, it certainly proves very effective in a large class of cases which are not touched by the usual remedies. In measles, scarlet fever, and the other acute contagious diseases it has become one of the remedies of choice with hundreds of good physicians.

Calcium sulphide should not, however, be used as a substitute for vaccination or to replace antitoxin in diphtheria. These specific remedies should always be employed—when indicated—the one as our best prophylactic; the other as a remedy that practically always cures, provided it is given early enough in the course of the disease. But there is no good reason why every person suffering from smallpox should not also be saturated with the sulphide; nor why the same substance should not be given as a routine remedy to all diphtheritics. Personally, we believe this good practice.

The suggestion that calcium sulphide will prevent carsickness and seasickness is a novel one. While we have greatest faith in atropine (or hyoscyamine) and strychnine in the severe cases and in cactoid in the lighter ones (as advocated by Doctor S. Austin Davis) we hope that some of "those who go down to the sea in ships" will give the calcium-sulphide method a trial this summer and will then report their results.—ED.]

"SPINA BIFIDA" AND INFANTILE "COLIC": TWO CASES IN WHICH PERSISTENCE WON OUT

We all often hear it said that the youth had better stand back and let those that are older do the talking, so that he—the younger—may learn. That is something grand, sure—just sit around and absorb all you can, and never give out anything yourself. Now, as one of your youngsters, I enjoy this sponge-business very much, to be sure (?); however, today I feel constrained to write about two cases that present more than just a report of a diagnosis and curative treatment (which would be of very little value, indeed), but which teach a lesson about the great need of care in arriving at a correct diagnosis.

Case 1.—In a baby born of a healthy mother, and in normal labor, a tumor about as large as a hen's egg had formed at the junction of the lumbar and the sacral vertebras, and appeared to be exactly in the center line of the back over the spinal column. The doctor in charge was not sure as to whether this growth was there at birth; it was observed, though, a short time afterward, and it gradually increased in size. After due deliberation it was diagnosed as spina bifida, and the mother was told that when it ruptured the baby would die. At this juncture, another physician was called in consultation, and he verified the diagnosis. Since a fatal issue was now looked upon as inevitable, nothing was done for the child except to ease the pain, which seemed to grow worse.

One night, about three weeks after its birth, an attendant started to dress the child, when he noticed a small break in the swelling and a whitish discharge issuing from it. He put the child down, expecting it to die immediately, according to prediction. As the babe lay there it moved, whereupon the sac ruptured and bloody pus flowed from it freely. While the attendant watched, expecting death every moment, a miraculous change took place. Instead of expiring, the child dropped into a profound sleep, from which it could not be aroused for several hours—the best sleep it had enjoyed ever since it was born. They did not call the physician, because they thought it of no use; but when in the morning they found the child remarkably improved they did send for him.

The doctor was nonplussed, of course, to see the child doing so well, and, after further examination, he was honest enough to admit that he had been mistaken, the swelling being an abscess only. He applied a poultice and instructed the attendants to keep this up until the sore healed. The opening closed, but it burrowed to another spot; it ruptured there, closed, and burrowed again; and so it went on, making many openings to this

one abscess, until, at last, the physician gave up. Then I was called.

The history, as I elicited it, I have given. Making a close examination, I found a small defect in the sacral region, but no marked furrow. The child exhibited no signs of paralysis, nor had there been any. What the parents desired of me was, that "the back be cured." The back, from the twelfth rib down to the sacrum, was covered with small openings, where the pus had ruptured through. I suggested laying open these furrows, but met with unyielding refusal.

By way of alternative, I then directed that the back be thoroughly cleansed, three times a day, with green soap, followed by moistening with hydrogen-dioxide solution of full strength, after which a weak ointment of scarlet-red (medicinal) was to be applied. Before all, the poulticing was ordered stopped. In just six days the baby's back was healed up—much to my surprise, you may guess. However, there did remain a jaundice that resisted all my efforts, but disappeared of itself by the time the baby was four months old. After that, it has been a healthy tot.

Surely, this must have been a blood clot, caused by some injury at birth and which broke down. How about it?

The second case is of a somewhat different kind.

Case 2.—Also a baby, and born of healthy parents and in normal labor; weighing 10 pounds at birth, and normal in every respect. At the end of a week this girl baby was attacked by a severe colic that required opiates to relieve. The attending physician gave treatment for a week when, getting no result, he put the child on anodyne pills, telling the mother that it was suffering from a stricture of the bowels and would die at or before it was six weeks old. He also said that it was a "blue" baby.

When six weeks old, the little one had become so bad that it cried continually day and night and could not rest at all unless it lay over its mother's right arm with its body almost bent double in a lateral direction. It was losing weight fast, getting down to only 6 pounds (I think it was). Then a relative, when in town one day, approached me and begged me to go out and see that sick girl. He also assured me that the older doctor had abandoned it to die.

I went, and found the child suffering from malnutrition, seeming to be nothing but skin and bones. Its head was square and its face very small for the size of its head; its abdomen was rigid and tender; the pulse was very fast, although regular; no fever was present. I could detect no tumor by rectal or abdominal examination. The stools showed massive milk curds. The bowels were constipated, and injections brought only a little fecal matter. However, the child never had vomited, except for small amounts, sometimes, just after nursing. I did not formulate a diagnosis, but suggested a possible intussusception, or else that it might be a case of aggravated intestinal indigestion.

On general principles, I inserted a soft-rubber catheter very high up the colon and gave a copious enema. This gave some relief. Then I ordered to be given calomel, 1-10 grain every half hour for ten doses, followed by senna. Further I prescribed a senna mixture, dose three times a day; besides galactenzyme, one tablet every two hours. The use of infant anodyne (Waugh) was recommended when relief from pain became necessary.

Under this treatment, the child improved slowly, gaining one-half pound a week for three weeks. Then it had a week of hard colic again, when I advised daily enemas, and changed the senna mixture to a cascara preparation; and the child now is almost six months old and is in fine health. However, it still has occasional colic attacks.

I do not approve of giving up a patient until life is gone. To do everything possible to save the sick is our duty, as physicians.

I like the alkaloids, and use quite a few of these remedies. Calcidin is an old standby.

Hunter, Okla. W. B. NEWELL.

[The doctor concludes his letter with this remark: "Perhaps I'll write again providing this gets into your excellent journal." Now we know he'll write again!

These two cases teach several lessons. First, be sure of your diagnosis before venturing a prognosis. Second, be thorough. Third, use common sense. Fourth, in case of doubt clean out the intestinal canal and keep it clean. Draw as many more conclusions as you like! By the way, I wish the doctor would tell us whether or not there was a rise of temperature in that first case. If present, that should have given the key to the trouble.—ED.]

A SIMPLE APPARATUS FOR INTRAVENOUS MEDICATION

The apparatus which I have designed for intravenous medication has been of great value in my work, and the hope that it may be

Infusion apparatus recommended by Doctor Moore

of assistance to the profession leads me to describe it in detail.

This apparatus consists of a specially designed 12-ounce flask of heavy glass, which is ground at the top, is low, and has a broad, firm base. The flask is closed with a German-silver screw-cap (with rubber washer), through the center of which is passed a two-way German-silver tube, silver-soldered. To each of these tubes is attached about two feet of stout flexible rubber tubing. The long, or "flow," tube extends to the bottom of the flask. The short, or "air," tube terminates at the neck and leads to an automizer-bulb, to which it is joined with a glass connector. This connector may be packed with sterile cotton, for the purpose of filtering the air as it passes through. Air is pumped into the flask by means of the bulb, thus forcing the solution out of the flask by way of the flow-tube.

The flow may be turned on or off at will by means of a cutoff attached to the rubber tubing. With a needle, preferably of platinum, and two glass "signal tubes," ground to fit a needle of the Luer type, the apparatus is complete. Two signal tubes are absolutely necessary for perfect results. One is attached to the apparatus, while the other is used merely as an aid in handling the needle.

To sterilize the outfit, wash it thoroughly with a 5-percent solution of carbolic acid and rinse with sterile water; or boil it with the tubes off, taking care not to subject the glass to sudedn changes of temperature. The bulbs must not be boiled.

Pour the solution into the bottle and screw the cap down tight. Place the patient in a recumbent position, with the arm for injecting at right angles to the body and resting comfortably upon a table. The operator should be seated, facing the arm with his left to the patient.

Sterilize the arm at the point of injection, by washing with soap and water, followed by alcohol; or by means of the iodine skin sterilization. Bandage the arm just above the elbow. Opening and closing the hand rapidly will help to raise the vein, which should be well distended.

Attach one glass signal tube firmly to the flow-tube and hold it above the bottle. Apply pressure with the bulb until the air has been expelled from the flow and the signal tubes. Place a sterile finger over the opening to the signal tube, fill the flask tight with air, then close the cutoff.

The needle may now be inserted. Attach the needle to the second glass tube, using a twist to the right, which tightens it. Care must be taken to give only a slight twist, so it can easily be removed. Raise the skin with thumb and fingers and pass the needle well through it, over and parallel to the vein. Release the skin to normal position, when the needle can be worked gently into the vein, using but little pressure, in order to avoid penetrating the opposite wall.

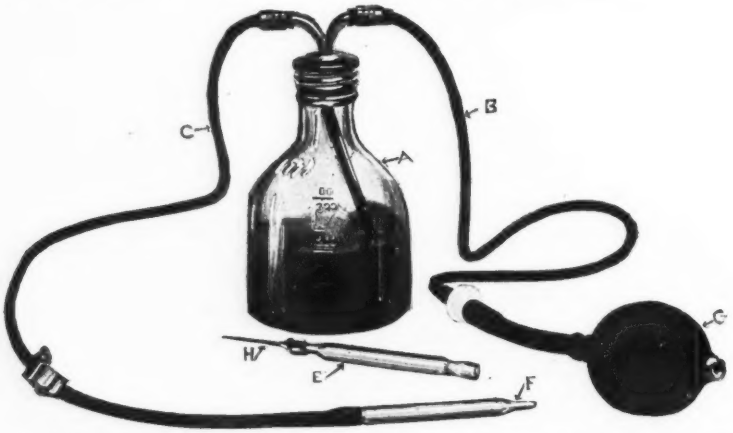
When the blood rushes back into the glass tube, showing that the needle is in the vein, remove the bandage and very carefully disconnect the signal tube from the needle and attach the one connected to the apparatus and release the cutoff. The bulb now is compressed from time to time, to keep the flow continuous and steady.

To complete the injection of 8 ounces requires from five to fifteen minutes, according to the size of the needle and the pressure used. In the majority of cases, the 22-gauge

needle is the proper size, but in children or when the veins are small or deep-seated the 24-gauge is better. Both sizes should be included in the outfit.

The solution may be injected to the last drop if desired; but, to avoid injecting air into the vein, care should be taken to disconnect the needle before the glass tube is empty.

Care should be exercised in bandaging the arm, so that it can be instantly released, to avoid clotting in the needle.



Infusion apparatus. A, flask; B, air tube; C, flow tube; D, air filter; E, glass signal tube with ground tip; F, connection tube with ground tip; G, air bulb; H, hypodermic needle, 22 gauge (Yale Luer).

A welt raised at the needle point will indicate that it has not entered the vein or that it has passed through both walls—or clear through the vessel.

Avoid needles with a long point. Cut them off, if necessary; and be sure that the needle is open. Never turn on the solution until you see the blood in the signal-tube. Never attempt to insert the needle into the vein at the side—always from directly above.

In giving salvarsan or neo-salvarsan, salt solution before or after making the injection is unnecessary with this apparatus.

It is a very simple matter to insert a needle into the vein. There is virtually no pain, and neither the vein nor the surrounding tissues are injured. I have utilized this apparatus many times in the intravenous medication with salvarsan and neo-salvarsan, without a single time finding it necessary to resort to venesection.

This apparatus[1] ought to meet all requirements both of the specialist and the general practitioner. It is small and compact, accurate and reliable in its operation, permits the use of a small hypodermic needle, and eliminates the necessity of venesection.

HARVEY A. MOORE.

Indianapolis, Ind.

[1]The apparatus is manufactured by The Underwood Chemical Company, Indianapolis, Indiana.

INTRAVENOUS MEDICATION

The dangers associated with intravenous medication have been very much exaggerated. Almost the first question asked me in every instance is, "Doctor, do you not get violent reactions from your treatment?" Most assuredly I do not. There is not as much unpleasantness as in giving a hypodermic injection.

I have now been employing the intravenous method for two years and have given hundreds of injections, with only two unpleasant reactions; and I now feel positive that these resulted from an overdose of nuclein.

I make up my own solutions in the office, using extreme precautions to maintain perfect cleanliness, using for my vehicle *freshly boiled* distilled water.

My stock solution I make in pint lots, and the one used for rheumatism contains 2 grains of salicylate of sodium to the dose. Cacodylate of sodium, 2 to 8 grains, is added to solution No. 1 when for primary syphilis, also for muscular forms of roseola. Plaques on mucous membranes and condylomata disappear very quickly, and I have had primary lesions disappear after one treatment. All conditions where arsenic is indicated call for the addition of the cacodylate to the solution.

Mercury in the form of bichloride is used in conditions calling for mercury. Nuclein, to increase nutrition, helps me a great deal; but it should be given only in small doses, say, from 1-3 to 1-2 ampule to 5 Cc. of the solution.

The standard solution must be made up under thorough aseptic precautions, to maintain perfect sterility, and must be kept well corked and away from light. This solution contains per 5 Cc.:

Calcium creosote	grs. 10
Sol. iron phosphate	grs. 2 1-2
Potassium phosphate	gr. 1-6
Magnesium glycerophosphate	gr. 1-5
Sodium chloride	gr. 1-5

This completed solution should be a beautifully clear, blood-red, with no sediment. It will keep for weeks.

I am using this formula for anemias, neurasthenia, bronchitis, asthma, early tuberculosis, skin diseases, rheumatism, syphilitic infection. In all conditions where there is a deficient alkalinity of the blood, it rapidly increases the number of red blood-corpuscles and decreases the white. The cell-salts, such as those of sodium, potassium, calcium, iron, silicium, magnesium, are essential elements in the animal economy.

A lack of any of these salts means a departure from the normal and a disturbance of the vibratory stimulus to the perfect body-chemistry. The solubility of the blood depends upon potassium. Calcium affects its defensibility, and also helps to hold it in solution. It forms the wall of the cell, and helps to hold other salts in solution. Without this salt in the proper proportion, the cell cannot maintain its integrity, the viscidity of the blood is reduced, and the colloidal membranes are weakened, thus allowing albumin to pass through the membranes. Hence, my grounds for using it in albuminuria, and also in eczemas and catarrhal conditions.

One great essential in organic chemistry is oxygen, without which cells soon break down. Iron is the necessary element to hold oxygen in solution in the blood, so we have the indication for soluble iron intravenously.

Biochemistry shows us the cause of disease in the disturbed relation of the cell-salts, and intravenous medication furnishes us the most direct way of restoring the equilibrium, which means health.

The subject is a new and interesting one. One becomes enthusiastic as he grows more familiar with it. To give an anemic patient a treatment and in a week find the red blood-corpuscles have increased 1,000,000 to the field and have resumed a normal appearance, or to have a neurasthenic come back in four days and say the effect was simply wonderful, makes one enthusiastic.

Then, to know that you can place the chemical substances directly where they are needed without depending on absorption and assimilation, to put them into the circulation, and the further fact that the cells are rapidly distributed through the body, and that fact proven by the patient tasting the creosote in less than fifteen seconds after you start the injection; and, also, that the garlicky odor of the arsenical compound can be detected on the breath in two minutes, showing that the elimination takes place through the lungs and begins almost at once—all these conditions make it reasonable to believe that the beneficial results should begin immediately.

I have written at random on a subject that furnishes too much material for anything less than an exhaustive article. If you will once try it, my brothers, you, too, will grow enthusiastic.

I am just beginning the use of iodine intravenously, but as yet have nothing to say.

I use a Leur 10-Cc. all-glass syringe with a No. 27 platinum needle, boiling always before using and cleaning thoroughly immediately after. I give the treatments from two to seven days apart, and patients are as pleased with the method and results as I am myself.

W. N. FOWLER.

Kalamazoo, Mich.

[This is an interesting communication upon an important subject, which we hope may be thoroughly discussed in these pages.— ED.]

CARBON-DIOXIDE ICE IN EPITHELIOMA, OR SKIN-CANCER

Of all the different modes of treatment that have been recommended and tried in those obstinate and long-standing facial blemishes known as skin-cancer, there is none that will give such positive results as the application of carbon-dioxide ice.

In the early stages of this affection, two or three applications usually will suffice. It will require deep pressure with the icy stick for about thirty to sixty seconds, to be repeated once in three weeks. Hardly a mark will be left of the former epithelioma.

In the more advanced cases, those in which the destruction of tissue is quite pronounced and of some depth, it will take a longer time to accomplish the same result. As said, the

carbon-dioxide stick should be applied to the lesion from thirty to sixty seconds, and with a firm, deep pressure. Should a blister form as a consequence, it is advisable to leave the same alone and allow it to dry up. Should any pain follow the application, then cloths wrung out of hot water and applied frequently will relieve it.

The lesions, after being treated, must not be covered; if they occur on a part of the body covered with clothing, a vaccine-shield or similar protector should be placed over it and secured with adhesive strips, so that the clothing will not come in contact with the sore. If any discharge is caused by the treatment, gently mopping it away with absorbent cotton will suffice.

In treating lupus in this manner, the results have been found to be equally good.

Senile keratosis of the skin in the aged usually is a forerunner of an epithelioma, so that the destruction of these facial blemishes (one or two treatments with medium pressure for fifteen seconds three weeks apart) will be found an excellent prophylactic of a more serious nature later on. But the constitutional remedy must not be lost sight of in treating any of these skin lesions.

Berberis aquifolium is one of the best remedies where the skin is dry, inelastic, and scaly, and 15 drops of the "specific medicine" four times a day will do wonders. Rumex, in 10- to 30-drop doses four times a day, is indicated where there is indolent ulceration, anemia, and little disposition to respond to treatment. It will surprise everyone not familiar with it by its tonic effect upon the system.

Phytolacca in 10-drop doses four times a day will be called for when the mucous membranes are pallid and there is a burning pain and swelling of the glands.

Echinacea will be indicated where the tongue has a dark coating and the mucous membrane is inclined to redness. As a blood purifier, it is unexcelled. It will relieve the pain of cancer of the throat better than any opiate.

Hydrocotyle asiatica in 10-drop doses of the 1*x* dilution every three hours, is an excellent remedy in lupus. It will be indicated when the skin is thick and scaly, and there is profuse perspiration.

When the vital forces are on the wane and the patient complains of exhaustion and weakness, strychnine sulphate in 1-30-grain doses four times a day will be a very necessary remedy throughout the entire course of treatment. The bowels must carefully be looked after. The epsom-salt bath two or three times a week also will help to comfort the patient. One pound of this salt to the bath will suffice.

A. S. TUCHLER.

San Francisco, Calif.

A LETTER FROM AN OLD DOCTOR

"Business unity in the medical ranks" hits the nail squarely on the head. I am past the three-score mark, in full vigorous health; was brought up in the practice of medicine; am a graduate of the medical department of the Western Reserve University, 1876; served as assistant house-physician in Lakeside Hospital, A. A. Surgeon, in charge U. S. Marine Hospital Station; have taken post-graduate courses in New York and in Chicago; have written several articles for medical journals; am eligible to membership in the A. M. A.; enjoy most friendly and professional relations with best physicians of this city and personally am acquainted with such men as Drs. G. F. Lydston and J. B. Murphy of your city. I have a son and daughter in Chicago, the daughter a graduate of Mercy Hospital, supervising nurse in the health department, and employed in the engineering department of your city. I should be glad to locate in a suburb of Chicago, to continue in the practice of medicine, so as to be with our children, but I know that I probably could not pass the state examination, and, therefore, should not be allowed to practice medicine in Illinois.

How inconsistent and unjust and how contrary to the United States Constitution that one who has complied with all the regulations qualifying him to practice medicine in Ohio, eligible to county, state, and national medical societies, can not, after long years of honorable, professional work, engage in his profession in any other part of the United States or wherever the stars and stripes float without being obliged to pass an examination that should be required only of recent graduates, fresh from college-theories and familiar with their studies, much of which is unpractical in actual practice. And all this injustice and inconsistency is brought about and backed up by greed and narrow jealousies of those who pose as leaders of the medical profession, and as progressives in medicine and ethics.

In my opinion, it should be one of the first and most important duties of the American Medical Association, a representative body of all the states, to correct these inconsistent, unjust conditions; which is more important

than the efforts of some of its leading members—such as, for instance, organizing the American College of Surgeons, that artificially divides the profession into classes and rends it asunder, rather than unifying it.

FRANK H. TODD.

Cleveland, Ohio.

A NEW SANATORIUM

Dr. Charles A. Shepard writes us that he has opened a modern, thoroughly equipped sanatorium for the treatment of tuberculosis, to be known as the El Reposo Sanatorium, at Sierra Madre, California. This will be of interest to Doctor Shepard's many friends who will wish him well in this new venture.

BUBONIC-PLAGUE TRANSMISSION

A touching teaching incident happened in India not long ago. Helen, the little daughter of the United States consul, had a little pet, Don, an Italian grayhound. Little Helen was just emerging from babyhood into girlhood. Don, the dog, was just leaving his puppyhood. The twain made a lively pair. Don was young and his cuticle tender, and the fleas loved him dearly. One of his little mistress' daily duties, doubly disliked by both of them, was, to wash her pet free of fleas.

One day, when she had just about finished this ablutory task, Don, with many a squirm, broke away from her, dashed across the court and caught a rat he had espied and proceeded to shake and chew the rodent in a manner fit for an old ratter. When the dog had finished the job and his mistress was able to catch him, she found him covered again with fleas from the rat he had just killed. So, she proceeded to wash him once more, when some of the fleas, in order to escape the wet bath, jumped on her and promptly bit her. When she related the occurrence to her mother, the latter said, "Why, this is the first rat Don ever caught. How in the world did he do it?" "Well," came the answer, "it must have been a very old rat, for it could hardly run."

As a matter of fact, it was a rat hunting a quiet place to die, being sick with the bubonic plague, and the little girl was one of that frightful 80-percent contingent that make up the mortality rate from bubonic plague. And this is one of the reasons why we see India placarded, telling how the rats carry the plague, and why, when a rat is found dead, not from violence, the health-officer is notified and the pathologist holds a postmortem, to see whether the cause of death was bubonic plague.

E. S. MCKEE.

Cincinnati, Ohio.

TREATMENT OF HAY FEVER

I should like to outline a course of treatment for hay fever that has been giving me excellent results. The patient is allowed no local home treatment whatever (thus removing possibility of cocaine habit). At the office, each day, the following:

Contract the tissues by applications of 2 percent cocaine solution, applied on pledgets of cotton; wash out with an alkaline antiseptic; and then spray on iodinized oil one-half of 1 percent.

Put dark glasses on patient, and caution him against blowing his nose at least an hour after this treatment. Let him snuff back any secretions or excess of the oil, and expectorate. The glasses are to be worn daily.

Internally, give iodine in some from which will not easily upset the stomach. Give at bedtime a pill consisting of bile extract, blue mass, aloin, and podophyllin, 1-6 grain of each. Every morning, before eating, a saline laxative.

Inject full doses of a multiple-infection bacterin, containing as many strains and as many varieties of organisms as possible, about 225,000,000 being the initial dosage, running it up to a billion. The vaccine I use contains: bacillus influenzæ, pneumococcus, micrococcus catarrhalis, staphylo- and streptococci, and bacillus diphtheriæ.

I believe that hay fever is due to a peculiar sensitiveness of the nasal mucous membrane to these various organisms, with pollen, dust, or gases as the exciting causes; dust and pollen possibly carrying in bacteria, which develop in the presence of moisture. The absence of fever, and the chronicity of the disease are due to a very low-grade infection, and to the profound depression of the reactionary power of the patient's system.

During the resting stage of the trouble, the bowel cleansing should continue, with the addition of the three arsenates, and phosphorus. Order a bland diet, containing little meat and plenty of salads and fruits.

R. H. CHILTON.

New Orleans, La.

[There are some excellent ideas in this paper. We wish particularly to second the suggestion that bacterins be tried in these

cases, although we believe best results are obtainable with autogenous bacterins. The latter are easily made and relatively cheap—and if the cultures are carefully made they should have a certain specific action. There is danger in the use of cocaine in hay fever, so that we prefer to get along without it when we can. Doctor Candler has devised a special treatment for the disease in which none of this narcotic is used. We shall be glad to supply details concerning it to any physician who is interested.—ED.]

A LETTER FROM A "LIFER"

In the March number of CLINICAL MEDICINE there was an editorial telling something about two remarkable men, Jack Apple and Louis Eytinge. The first of these lives in Savannah, Georgia. Some years ago, in diving into shallow water, but two days before his graduation from the Georgia Institute of Technology, he broke his neck, and since that time has been a helpless paralytic. We almost said "hopeless"—but Jack has not been without hope. Hope has kept him alive and kept him happy and useful—and today he is making more money and more real joy than most of the readers of this journal. Turn back to the story and learn how.

The other man was Louis Victor Eytinge, who is a life prisoner, for murder, in the Arizona State prison. He went in a consumptive, but he made it his first business to get well—and then he went into business and made a success of it. Turn back, again, and read the whole story. I would tell it all over again if I had space and time—I am shy of both today—for you should know something about the man and what he has done before reading the letter which follows.

This is a personal letter, and I do not feel that I should print it all. But there are parts of it which I want to divide with the readers of CLINICAL MEDICINE, because I believé it will do them (us) good. It follows:

That copy you sent me of your March issue was the first I'd seen—but it demonstrated one thing, that there is one other who possesses the power to persuade because of ability to write simply, naturally and heartily—that other is the man who wrote the March editorial—yourself!

Frankly, Doctor, I've been discussed in quite a number of magazines, from *Collier's* down to lurid little sheets, from *Chicago Tribune* down to socialistic sheets, and although I've read these, and know what *The American* and *The Outlook* are shortly to say, I've appreciated more the few columns from your pen than anything that has yet been said. All because of the way in which you said things.

I'm rather curious as to the common friend from whom you secured your information. He's wrong in two particulars—the weight went up to 190—and I've given up the hair work and even my private clientele in lettersmithing and devote myself exclusively to the magazine and book articles that have been promised publishers. To be sure this is not so remunerative as single-page letters that I charged $15 for, but it gives me a greater radius of influence, develops a greater circle of interested folks who will be led to think of this great economic problem of the prisoner, because of my performances.

I thank you for your good wishes as to a future—for my liberty. In all frankness, I rather think I'm justly entitled to the sympathy and assistance of the medical profession, for mine is the only case of *poisoning* recorded, where a verdict was found without either a chemical analysis of the body, or a confession of guilt. It is a matter of record that over my public plea for such an analysis of the organs, the body was shipped out of the state.

It is a matter of record that the "expert for the State" admitted that he made no close examination of the cadaver, simply because it was an unpleasant task—that he could not say the dead man died either natural or unnatural death. This doctor is deservedly one of the leaders of his profession in the State. I make no protest, nor have any criticism of his stand. He was simply engaged as one of the State's experts. The other alleged expert for the State had no knowledge whatever of toxicology and had been refused permission to practice in California.

It is a matter of record, I think, that my alleged victim was asthmatic, tubercular and with complicated cardiac troubles. The evidence in the case consists in the fact that I bought chloroform and chloral hydrate, the one for his heart troubles and the latter to make easy his rest and alleviate his asthmatic attacks. Both were bought at his suggestion and in his presence—by me, because I was also paying the room rent and board bills, but I was befriending my alleged victim.

It is also true that I took him for a ride into the country—that I came back alone—that I fled—but it is also true that I left the country because of two $500 drafts and some small check that I had forged during the week previous. I'm the first to admit that some circumstances against me are mighty strong—also the first to claim that my conviction was brought about by an inflamed prejudice due to my past criminal conduct, sensationalism on the part of some papers, lack of funds with which to make adequate defense, and a medieval jury system that does not provide for a jury of superior intelligence to handle a case that involves scientific testimony, etc.

Frankly, I'd like to write some few paragraphs to go with the coming article on Jack Apple, but I'm so far behind in my own work that it is hard to spare the moments for this little chat. I'd like to tell some little of my personal views, but I believe in myself, in the work I am doing and the greater possibilities that lie ahead. Man alive, what especial credit is due a chap because he is cheery and enjoys his work? What else is there for one to do? I'm an admitted crank on the subject of *human efficiency*—and I view everything from the angles of *why*, *what* and *how*? *Why* should one be downcast, downhearted? *What* is there to be gained by pessimism? *How* shall one win any reward?

To my mind the man who does not love his work is out of his place. But one worker is able to do

efficient labor, the man who sings at his work—who makes of it almost play. I look forward in all frankness, to the reward in the thing I am to do. It may be profit, it may be repute, it may be soul satisfaction—but there is the reward always. I've found out for myself that moody moping makes for mental misery. Pulling the long face doesn't pull for a long life, no more than pulling the long bow pulls in the long green. Concentration—the singleness of purpose—helps a lot. I remember

Louis Victor Eytinge

when a boy following behind a farmer's plow for angleworms to serve as fish-bait. And I've learned a lesson from the old farmer's homely wisdom, when he said, "the worm that wiggles the waggliest never works its way into deep dirt."

I have a part of master egotism in my makeup and find it an earnest help. I've found out that the highest vision is the farest sighted—found out that the highest idealism for living is also the most profitable for business—that the making of goals today is but the tuning up for the winning of games tomorrow. I know not what tomorrow brings, but I do not care to see "unrolled the scroll of Fate"—but whatever comes will find me ready to do my darnedest with the material it offers.

I believe, in all sincerity, that the things I've achieved are but little things to the parts I must yet play before my turn upon our Stage is ended. I can look back and see myself a lunger with my daily hemorrhages—then a beginner in business, then a mail salesman; a little while and I've found that I can do still more as a writer on criminology—that if I concentrate I can lift myself into leadership in business correspondence.

Today I am telling big business men how to make their letters more productive of both profit and good will—tomorrow, perhaps, I may be telling the world how to reduce the crime cost of our country from five or six *billions* to one third of that stupendous total—tomorrow I may be playing a master-role and all my aims of today are in line of preparation. There is no especial credit coming to me, even if I succeed beyond my present hopes, for what in the deuce can a chap do, if he wants to make a *man* of himself, other than to *study*, *strive*, and—*smile?*

Earnestly,

LOUIS VICTOR EYTINGE.

Florence, Arizona.

CONCERNING BAKING POWDERS

It is strange what unaccountable notions will sometimes obsess the popular mind, without the slightest ground for their existence, and remain for years and years, defying all attempts at dislodgment and despite all reasonable arguments and all experimental disproof. The writer remembers for example in the days of his youth that for several years, tomatoes were tabooed as a food, under the popular impression (where or how it started, heaven only knows) that they induce cancer; a prejudice which died hard. And everyone can cite some similar delusion, especially in the matter of food stuffs, that has held the public in its foolish spell for long periods of time.

These obsessions, in themselves, are, of course, exceedingly ridiculous and even humorous, but unfortunately they often have a serious side in that they are apt to hinder progress and hamper trade and may even injure very gravely some special business. Such an obsession is the one which for almost half a century has regarded the presence of alum in a baking powder as being injurious to health, and has looked askance on all baking powders that contained alum. Nobody ever troubled to inquire whether it was really injurious, or why it should be injurious. There was simply a vague, unreasoning notion abroad that it was so; and the more it was acted upon the more it spread, until it actually became necessary to appoint a commission to investigate the matter and to make a report which could be circulated, with the weight of its authority, for the purpose of correcting the error.

The report of the Remsen Board has now, once and for all, put an end to this foolish

alum obsession. It declares, not merely upon its own say-so, but upon conscientious experimentation made on human beings by men of the highest scientific attainment, that alum is neither injurious nor unwholesome as an ingredient of baking powder; and should set at rest the minds of anxious housewives, who have for years been intimidated into paying exorbitant prices for baking powders free from alum.

Sometimes these baseless prejudices in the public minds against this or that form of food stuff are deliberately "worked up" by some trade concern which has an interest in one article being widely used, or in another being universally banned. Thus, in this same baking powder matter there has been a very assiduous propaganda on the part of the baking powder trust to create a feeling against the use of egg albumen in the manufacture of baking powder. We say a feeling advisedly, for impartial scientific investigation fails to disclose that there is anything at all involved in the dispute beyond the sheer trade end of it. So far as the question of wholesomeness is concerned, it is a matter of indifference whether baking powder contains egg albumen or not. And the quantity contained by those baking powders which employ it is so small that it certainly can have no effect one way or the other upon the digestion of the consumer. The only issue, so far as we are able to discover, is the part played by the egg albumen in the standardization of the article.

The principal gauge of the efficiency of a baking powder is its gas-producing capacity; and the most available means of testing this capacity is what is known as the "water glass test," that is, a rough estimation of the amount of gas evolved by the powder, upon the addition of water, by the bubbles which emanate from it and foam up in the glass. It has been advanced against the use of egg albumen that the value of this test is thereby vitiated because the egg albumen itself gives rise to gas bubbles and thus confuses the accuracy of the test. We do not believe that this objection can be successfully maintained. Scientific reasoning would not lead us to suppose that egg albumen had any gas-producing properties and experiments have confirmed this scientific reasoning. The argument seems to be all in favor of the egg albumen powder, for it is conceded by every one that the presence of the white of eggs in baking powder furnishes a viscous quality which imprisons the gas instantly thus, affording a reliable means of testing the available gas strength of such powder. On the other hand, baking powder which has no egg albumen may very easily fail to show its full gas strength since the gas bubbles, lacking the influence of the albumen, break rapidly as they come in contact with air. The statement that the presence of egg albumen makes the baking powder appear stronger than it really is, seems, therefore, to be untrue. On the contrary, the presence of the egg albumen enables anyone to determine the exact amount of available leavening gas produced by the baking powder, and consequently acts as a guarantee to every dealer and user of the goods, ensuring that they shall always secure fresh, dependable baking powder.

In other words, the presence of egg albumen in a baking powder has nothing to do with gas *production*, but exercises considerable influence upon gas *retention*, which is manifestly just as important to the efficiency of the powder as gas production, to say nothing of its role, as just intimated, in the estimation of that efficiency. And in this respect the egg-albumen-containing powder clearly has the best of the argument.

We have already said that the use of the white of an egg in the manufacture of baking powder cannot possibly have any ill effect upon its food value. Hence the claim that the use of egg albumen constitutes an adulteration is absurd. In fact, the Federal Food and Drug Board of Inspection has already rendered a decision that the use of the white of egg in baking powder is not an adulteration within the meaning of the law; and this ruling is in accordance with all the canons, both of science and of common sense.

To such a state of acuteness has this trade fight attained that we understand bills have been introduced into Congress on both sides, one demanding that white of egg shall always constitute an ingredient of baking powder, the other requiring that it shall never be so. Personally, we are not very much impressed with the necessity of dealing with the question by means of legislation at all, but as between the two proposed enactments we believe that a statute requiring the use of egg albumen would be of benefit to the public, while we are equally sure that legislation against the use of egg albumen would be exceedingly disastrous from the public standpoint. There is no better or more commendable aim in public legislation than the improvement of food standards. Trade wars usually impede, if they do not actually discredit, this kind of legislation, and they are always greatly to be deprecated. It is most unfortunate that

several food commissioners of the various states have allowed themselves to be hoodwinked by the specious claim and charges of the trust and to be drawn into this fight. Already some of them have shown their broadmindedness by rescinding their ruling and refusing to take any further part in the matter. As stated above, the medical man, and the scientist everywhere, is not concerned with the pros and cons of a trade fight. He is concerned only with the welfare of the public as represented in the matter of food stuffs. From such a standpoint there would seem to be but two inevitable conclusions on this question of egg albumen in baking powder: First, it is in no sense an adulteration and in the small quantities in which it is used can have but little appreciable effect upon the food value of the baking powder. Second, it seems to be generally agreed that the presence of egg albumen serves to imprison the gas and thus to make possible a correct estimate of the gas-producing strength of the powder. So that, both negatively and positively, the advantage rests with the egg-albumen products.

T. G. Atkinson.

Chicago, Ill.

SEROLOGIC TESTS

The diagnosis of syphilis, tuberculosis, gonorrhea, and glanders, by means of the complement-fixation reaction, has added much to our ability to recognize these conditions.

These reactions, as well as the even more wonderful Abderhalden tests for malignant tumors, carcinoma or sarcoma, pregnancy, epilepsy, dementia præcox, and the like things, are far and away beyond the average laboratory-worker.

These tests upon specimens of blood-serum, spinal fluid or ascitic fluid, as the case may be, can be properly made only if the serum is properly collected.

Many of the samples that are sent to our laboratories (Abbott Laboratories) for these tests are unsatisfactory. These we do not attempt to examine, as such examinations usually are worthless.

In obtaining the serum for the Abderhalden tests, the following conditions must absolutely be complied with:

The serum must be as low as possible in diffusible substances that react with ninhydrin —this is attained by taking the blood in a fasting condition, that is, just before breakfast.

The serum must be absolutely free from blood-corpuscles and hemoglobin.

The serum must be collected aseptically and must be sterile.

To collect the serum, draw from the median basilic vein, under aseptic precautions, 10 to 15 Cc. of blood, with a sterile *dry* needle; place directly into a small sterile vial or Erlenmeyer flask. The blood is allowed to clot spontaneously at room temperature; do not put it in the icebox or incubator. The serum usually separates in sufficient amount in five or six hours.

Now withdraw the serum and place in a sterile vial—be sure you do not get any corpuscles in the serum.

The manner of collecting blood-serum for the complement-fixation test is the same, except that it is not necessary to obtain the same when the patient is in a fasting condition; this blood may be collected at any time.

J. Favil Biehn.

Chicago, Ill.

A GENEROUS OFFER: BE SURE TO READ THIS

We are very anxious indeed to stimulate our readers to take up the practice of eye refraction; and we are convinced, after a careful investigation, that the Ophthalmo-Axonometer, made by the Standard Optical Company, of Waupaca, Wisconsin, which we have mentioned more than once in our pages, and which is advertised in this number, offers the general practitioner just the means he requires for doing this work simply and easily.

We have therefore, for the benefit of our readers, made an arrangement with the Standard Optical Company by which they will furnish these instruments at a special club rate to fifty or more readers of Clinical Medicine, The list price is $58.50. Under this special arrangement they will be furnished at the very generous price of $40, which can be paid at the rate of $10 down and $5 a month thereafter.

If you wish to avail yourself of this opportunity send in your order at once TO US, and we will see that it is taken care of. Or if you wish further information about the instrument, write us and we will see that you receive attention. Remember, the offer depends upon a club of fifty or more—and you must be one of the fifty. Act promptly if you wish to get in on it. Address *The American Journal of Clinical Medicine*, Ravenswood Station, Chicago, Ill.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

I AM glad that my article last month has already brought some response. One admiring friend of the late Doctor Love sends me this quotation, which is the concentration of philosophy:

"Don't cry, don't mourn, don't sigh, don't kick; remember, laughter is the most contagious thing in the world. As a key to success, remember the world will laugh with the man who laughs, will sing with the man who sings; but, if you weep, you must weep alone. If you must tell your troubles, tell them to the policeman."

I hope that others will send me some of Doctor Love's sayings, as well as the sayings of any other good doctor.

I shall now continue the article on hysteria, which I began month before last.

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In hysteric hemiplegia or monoplegia, there is not the "mowing gait," tipped pelvis, and catching toe of organic disease. The paralyzed leg is dragged after the other or carefully pushed forward and the foot set down flat. "Steppage" is unknown in hysteria. Paralysis for certain acts or maneuvres and not for others executed by the same muscle is hysteric, as is astasia-abasia in which the power of the legs is good with the patient in the recumbent position, but not when he tries to stand or walk. Rhythmic spasm is almost without exception hysteric. In hysteric convulsions, the pupillary light-reflexes are not lost and the movements are purposive, and, hence, palpably due to volitional impulse, and they imitate more or less closely movements executed with a purpose; while in convulsions of organic disease and of epilepsy there is reflex iridoplegia, and the movements are incoordinate and often shock-like. In hysteric attacks, too, and immediately following them, there is a change in the ratio of the urinary phosphates, the ratio of the earthy to alkaline being as 1 to 1 instead of 1 to 3—the normal. Finally, the therapeutic test may quickly reveal the nature of the affection; to wit:

Mental treatment, suggestion, hypnotism or electricity may produce so sudden a change in the symptoms as to make the diagnosis ridiculously easy. A severe hysteric affection may occur in an individual who never has shown any other hysteric symptoms, such an affection remaining unchanged for years and be almost the sole sign of this omnivagrant disease. Further, fever, a rapid or subnormal pulse, retention or incontinence of urine, loss of the sexual power or desire, loss of pupillary reflexes to light, and ankleclonus, although as a rule indicating organic disease, may occur as symptoms of hysteria.

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The "mowing gait," "steppage," and the like are found in certain spastic hysterics. The heart in hysteria usually is distinguished, as Whittaker remarks, by its easy excitability. The increase of action shows itself first after some emotional excitement or after stimulation by coffee, tea, alcohol, and other drugs. It may amount to a genuine tachycardia, although the frequency rarely exceeds 100 to 130 beats a minute. Retardation is much more rare, although reduction in the frequency of the pulse has been observed in the socalled sleep-attacks. Real attacks of palpitation are rare; still, the patient may complain of a feeling of distress, even though the action of the heart is so feeble as to be imperceptible. The pulse is increased after the slightest effort or physical excitement, the mere thought of exertion sometimes being sufficient to excite it. In the rarer cases of retardation, the reduction of the cardiac energy may lead to syncope.

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Sleep-attacks in hysteria often simulate death. Hysteric angina is comparatively rare; however, it is much more frequent than real angina. The condition is recognized by the emotional disturbance that usually evokes an attack and exists during it as well as by the absence of organic disease. Patients affected by hysteric angina express great mental distress. They wring their hands,

throw themselves about and succeed in exciting and alarming everybody about them. False angina is distinguished by a different situation of the pains, which do not always begin in the neighborhood of the heart, but sometimes in the extremities or they wander about in irregular ways. The attack is associated with other evidences of hysteria, such as emotional manifestations, eructations, polyuria, and so on. Sometimes an attack may be produced by pressure upon a hysterogenic area.

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Vasomotor disturbances are frequent in hysteria, alternating flushing and blanching of the face being very common. There may be attacks of sudden coldness of the hands and feet, which in turn shortly afterward may become burning hot. There often is a sensation of numbness in the fingers and toes. Discoloration of the hands, more especially of the fingers, has frequently been noticed. Sometimes the hands are white and the ends of the fingers and nails blue. In some rare cases, the joints only are blue, while the rest of the fingers are red, so that the appearance is that of blue rings with crimson borders. The spastic contractions may be so intense as to prevent the escape of blood after puncture, it even having been observed that cups withdraw less blood from hysteric than from healthy subjects. Landouzy records cases in which the stroke of the finger-nail or of a pencil would bring out a red line which sometimes would extend itself out to a broad red stripe. Occasionally there develops in the middle of the stripe a pale-red lash-like elevation, so that curious lines can be traced upon the skin in autographism. This condition has been observed in epilepsy; here, however, it not persisting so long. Hysteric autographism may last for years.

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In this connection belongs also the condition of vicarious menstruation, with bleeding from the nose, mouth, ears, stomach, or other parts. Great difficulty in diagnosis often arises in this condition, as hemoptysis and hematemesis are especially frequent in young anemic women. The profession is more willing to accept a vicarious hemorrhage from the nose as epistaxis than as relief of surcharged congestions about the head. Studies of blood changes which occur in connection with menstruation, entirely independent of the refinement of the socalled Stevenson Wave, account for the escape of blood from dilated paretic vessels, in unsupported places. While most cases of hemorrhage from the lung are due to manifest or latent tuberculosis, there is no doubt that true hemoptysis results from suppressed menstruation.

In this connection, one is reminded of stigmatization, as Dr. Harriet C. B. Alexander has pointed out. Many of these cases are due, as Doctor Alexander and Doctor Coomes have shown, to suggestion. Facachon and Alexander were able by suggestion to raise vesicles like those of blisters on the skin; Jendrassik and Kraft-Ebing produced eschars, and Bouren, Burot, Ross, Mabille, and others induced hemorrhages. It is not so surprising, therefore, that it occurs in certain hysteric patients who have concentrated their minds continuously upon the wounds of Christ, as was the case with Louise Lateau.

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Hysteric affection of the lungs themselves is much more infrequent, but nervous disturbances in the larynx are among the most common expressions of the disease. Paroxysms of sneezing have frequently been recorded. Socalled nervous cough is a great embarrassment in differential diagnosis. This cough usually is dry, unattended by expectoration, and has a peculiar bellowing character distinguished as a "sheep-cough." It is characterized by its excessive obstinacy. It often appears suddenly and as suddenly disappears under the influence of emotional excitement, the worst paroxysms being usually readily controlled for the time by diversion of the mind. Severity of the cough may eventually produce pain in the chest and even hemoptysis.

Certain hysteric persons learn to draw blood from the mouth (gums, etc.) sufficient to tinge the sputum. Whittaker reported the case of a hysteric patient who for one entire day expectorated a blue sputum; but when instruction was given, in the presence of the patient, to have the next fresh sputum examined chemically and microscopically, that put an end to the phenomenon.

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Aphonia is one of the most common manifestations of hysteria, being usually in the form of adductor paralysis. The laryngoscope shows that the vocal cords are not approximated in phonation, though the glottis is closed in cough. The patients at times are unable to speak, but can still sing or express pain. Hysteric aphonia generally disappears, but many such persons remain aphonic for years. When the voice is suddenly restored by artificial means, as by electricity, faith-cures, miraculous interventions, or the

like, the cure as a rule is not permanent, but the condition returns when the patient is removed from the impression.

Thus, in a case reported by Lowerfeld, the patient's voice had been reduced to a whisper for years. She was induced to repeat the letters of the alphabet, at first in a low tone and then louder and louder, without attention having been directed to her voice. When the woman found that she could articulate the letters distinctly, she began to speak. She had been convinced that she was unable to speak and had made no effort to do so. The trial proved her ability without any reference to the will. Martins reported a case of hysteric aphonia in a servant in which diagnosis was established by the laryngoscope. The physician assured the patient that she would be able to utter a loud sound the moment he made pressure on the larynx. Thereupon, under pressure, the patient spoke with a loud distinct voice. Then, after repeated experiments of the same kind, the doctor told her that she would be able to speak as long as she held her hand on the larynx. This experiment also succeeded perfectly; but, as soon as she removed her hand away she was unable to speak. This condition lasted for weeks.

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The diagnosis of hysteria as the basis upon which symptoms are built, does not consist in the recognition of a disease, but rather in distinguishing in an individual whether this or that symptom is of hysteric origin or nature.

The most essential thing in excluding hysteria is, the recognition of the symptoms or organic disease or neurasthenia. Most organic diseases have symptoms which hysteria may imitate. Thus, hysteria, as Sokolousky has shown, very markedly simulates tuberculosis; but it cannot present the expectoration, the bacilli, and the physical signs of the disease. While the hysteria may imitate organic disease at the beginning, it can easily be eliminated in the future course of the malady. Hysteria may show at the start the symptoms of an organic heart disease, but the conditions are easily separated later. Certain symptoms belong more definitely to hysteria, such as the paroxysmal attacks, the emotional dreams, sensory hemianesthesia, certain hyperesthesias, the globus hystericus, and so forth. It must be remembered, however, that hysteria is a real disease of the brain-cortex, and that organic disorder may bring it on as a complication.

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The mental types of the hysteric female are divided by Des Champs into three classes: cerebral, genital (or sexual), and neuropathic (sensory or motor). These types may be pure or intermixed.

The general characteristics are, an absolute want of equilibrium in sensibility and will-power. There exists a mobility of humor in direct relation with facial impressionability to external influence (external ideas of perceptions) or to internal states (intrinsic ideas). The nerves vibrate to all sentiments coming from within or without and are registered without proper relation. One fact chased by another is forgotten. Another produces a momentary hyperexcitation which takes the place of truth, whence it is that falsehood is instinctive, but the patient protests her good faith if accused of the same.

This lack of equilibrium leads to decided modification of the mental faculties. Intellectual activity is overexcited, but in diverse degrees and variable ways, according to the particular tendencies adopted. Absorbed by preoccupation or controlled by an idea, the subjects become indifferent to all else. Their ideas are abundant and they rapidly pass from the idea to the act. Their vivid imagination, coupled with a bright intelligence, gives them a seductive aspect, but their judgment is singularly limited, attenuated or false. They judge excellently from a nonpersonal standpoint. They are quick at discovering faults, even of their own relatives, but faults attributed to themselves are repudiated. Their memory is capricious. They forget their faults and their actions under impulse, albeit these may be consciously done.

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The cerebral type is led by the intelligence. Such a woman ignores what passes in the sensorium commune. She displays little or no coquetry; what there may be is the result of intention and but temporary. There is an ethical sense, frankness and nobility in her ideas, disinterestedness and tact in her acts, and she is capable of friendship. Her tastes often carry her to male pursuits, and in which she succeeds. She becomes what is called a "superior woman," and only too often what is called an incomprehensible woman. She has but little guile.

Among the Books

LYDSTON: "BLOOD OF THE FATHERS"

The Blood of the Fathers. A play in four acts. By G. Frank Lydston. Chicago: The Riverton Press. 1913.

In another, and fuller, title, the author calls this production of his "A play, in four acts, dealing with the heredity- and crime-problem." Of course, it is not a play that ever will be acted on the stage; the author himself doubtless had no idea that it would be. But there are some kind of stories which can better be told in the form of a drama than in any other way; and this is one of them. In the form of a novel, "The Blood of the Fathers" most surely would be insufferably dull and boresome—it comes dangerously near being that in one or two places, as it is now. Still, put in the shape of a play, the author, at all events, is afforded the opportunity to declaim certain personal views without placing too great a strain on the printer's font or the reader's accommodation.

And, of course, that is what the play really is—a declamation, in the mouth of the dramatis personæ, of Lydston's own ideas upon the problem of crime and heredity. They are good ideas, all right, and expressed in the virile, red-blooded fashion for which Lydston is justly famous. There you have it in a nutshell—the book is an interesting, kinematographic way of reading what Lydston has to say about the subject of crime in its relation to heredity. And what Lydston has to say on such a subject always is worth reading, in any shape or form.

PERCY: "THE PROBLEM"

The Problem: The Autobiography of a Physician. By Charles Percy, B. Sc., M. D. New York: The Shakespeare Press. 1913. Price $1.00.

This is one of those stories of mystery and imagination that from time to time break forth from imaginative minds in the profession to whom some of the elusive problems of their calling made a fantastic appeal. It reminds one of Poe in its motif; although, of course, it has not the impress of Poe's literary genius.

The story is that of a physician who set himself to solve the great problem of life—not academically or deductively, in the contemplative atmosphere of his library, but experimentally and inductively in the active environment of his laboratory. Striding far in advance of Alex Carrel, this doctor undertook the task of making a dead man live by artificial transplantation of organs and tissues. Of all the exciting adventures that attended his efforts, and of the success he attained we say nothing, for that would spoil the reader's interest in the drama. We cannot—we really cannot—say that there is any serious merit of any kind in the story; still, it will serve to while away and make rather exciting what otherwise might prove a dull evening—provided one likes that sort of thing. Well, even for that purpose it is perhaps well worth a dollar. After you have read the book, you can give it to someone else for the same purpose.

HARTMAN AND BIBB: "PHYSIOLOGY AND SANITATION"

The Human Body and Its Enemies: A Textbook of Physiology, Hygiene, and Sanitation. By Carl Hartman, M. A., and Lewis Bradley Bibb, B. A., M. D. With 240 illustrations. Yonkers-on-Hudson, N. Y.: The World Book Company. 1913. Price 65 cents.

It is always a difficult matter to serve up the truths of any science for popular consumption and assimilation in a form which will be at once intelligible and accurate. Yet, in the case of medical science, this must be done, since the truths of medical science intimately and vitally concern public life and conduct. Not only must it be done intelligibly and accurately, but with some degree of human interest. The reviewer fears that we, of the profession, are prone to regard too lightly the attempts that are being made in this direction, as well as those that make them, and not sufficiently to appreciate the importance of the task that those people undertake.

Publishers and authors are doing both the doctor and the layman an invaluable service

in putting out such a book as this little manual. It reads so simply, even childishly, and is so elementary in its character, that we are liable to overlook the fact that in this very simplicity lies its most admirable quality, and even to forget the effort that was necessary to make it thus intelligible even to the child-mind. Those who ever tried to write for simple minds know something of what it costs. But, in truth, this is a splendid little textbook for the school and the home, and we cordially commend it to our readers' good word among their clientele.

SCHAMBERG: "DISEASES OF THE SKIN"

A Compend of Diseases of the Skin. By Jay F. Schamberg, A. B., M D., professor of dermatology, Philadelphia Polyclinic. Fifth edition, revised and enlarged. With 112 illustrations. Philadelphia: P. Blakiston's Son & Co. 1913. Price $1.00.

About as good a dollar's worth in dermatology as there is in the market. The author is manifestly an adept at epitomizing what he has to say. His style and arrangement are such that he is able to pack a great deal of meaty information, in very intelligent shape, in a very small space. Indeed, for all general purposes, this compend contains everything that is necessary to the recognition and treatment of all the commoner diseases of the skin. A terse differentiation table is given wherever such differentiation is practicable and called for. The illustrations are exceptionally good for a book of its kind; which, of course, is an important consideration in a work on skin lesions. We are disposed to think that the author might have devoted a little more space and attention to the use of bacterins in dermal disorders. We offer this suggestion for his consideration when he shall come to the preparation of a new edition.

WRIGHT: "HISTORY AND LARYNGOLOGY AND RHINOLOGY

A History of Laryngology and Rhinology. By Jonathan Wright, M. D., director of the Department of Laboratories, New York Post-Graduate School and Hospital. Second edition, revised and enlarged. Philadelphia and New York: Lea & Febiger. 1914.

Doctor Wright is one of the really great men in American medicine. In whatever aspect of his subject he is found working or talking, he displays a thorough mastership of it and says and does always something worth while. But, if there is any phase of medicine in which he is particularly at home and, therefore, especially interesting and instructive, it is the evolutional phase, whether we apply the term to the science itself or to the organisms with which the science deals.

Wright's special interests, as everybody who knows him is aware, have for many years lain in the region of the nose and throat, about whose biology and pathology and every other angle of being he probably knows more than any other living man. If there is anything to be told concerning the lore of laryngology and rhinology that is not told in this masterly book, we despair of ever finding it elsewhere. The work is a classic, and the higher interests of medical science owe a profound debt of gratitude both to Doctor Wright and to his publishers for such a contribution to its erudition. Surely, the best way to discharge the debt, the way that Doctor Wright will appreciate the most, is that all who are within reach of his book shall avail themselves of it and profit by it. We trust that everyone who sees this notice will forthwith get a copy of the book and read it. There is a rich treat in store for those who do so.

LOCKWOOD: "CANCER OF THE BREAST

Cancer of the Breast: An Experience of a Series of Operations and Their Results. By Charles Barrett Lockwood, F. R. C. S., consulting surgeon to St. Bartholomew's Hospital, London: Henry Frowde, Oxford University Press. 1913. Price $3.00.

One can hardly fail to be struck by the very modest note sounded in the title of this monograph, especially when one considers that the author is consulting surgeon to one of the largest hospitals in London, with almost unsurpassed opportunities for gathering data and making observations in the subject of which he treats. And this modesty of demeanor is carried into the text of the book itself. In style, it is really nothing more than a very unassuming presentation of case-reports from the records of the hospital and the annals of private practice, with such comments from the author as are necessary to the reader's best understanding of the reports.

In esse, however, in the cases themselves, their diagnosis and management, and in the manner of their setting forth, the book embodies the genius of its author, and we feel, as we read it, that we are sitting at the feet of

a great clinician and an able expounder of practical surgical science. There are not many illustrations, and such as there are are very simple and diagrammatic.

The book is not one that calls for much pictorial demonstration. The text is clear and concise—almost choppy in its terseness, with no unnecessary waste of words. The whole work is clinical in character, contributing nothing whatever to the theories of cancer, but furnishing invaluable aid to its clinical diagnosis and treatment.

"CASE-HISTORIES IN OBSTETRICS"

We have just received from Mr. W. M. Leonard, publisher. 101 Tremont St., Boston, Massachusetts, the announcement of another volume in his Case-History Series, this one being Dr. R. L. De Normandie's "Case-Histories of Obstetrics." If this volume is as good as those that have preceded it, we can urge every reader of this journal to secure a copy. These books are distinctly clinical. They give records of actual experience and they point out in a way that carries emphasis the pitfalls in diagnosis so often leading to errors in treatment. When the book finally reaches us, we shall have more to say about it.

COWAN: "DISEASES OF THE HEART"

Diseases of the Heart. By John Cowan, D. Sc., M. D.; with Chapters on the Electro-Cardiograph by W. T. Ritchie, M. D., and on Ocular Manifestations in Arteriosclerosis by Arthur J. Ballantyne, M. D. Philadelphia and New York: Lea & Febiger. 1914.

This book represents an attempt to review the entire subject of the pathology and therapy of the heart and arteries in the light of the most recent advances, and to present to the practitioner the results which have been attained and their bearing upon the clinical aspects of the matter. It is based, so the author tells us, chiefly upon his own personal experience and the records of his own hospital wards; but he also has utilized, where it seemed desirable, the recent writings on the subject and the experience of his friends.

According to that other famous authority on the heart, Mackenzie, whose book we reviewed last month, advances in the knowledge of this subject during the past few years have been principally due to the clearer differentiation of signs of disease, to which the electrocardiograph has greatly contributed. Doctor Cowan bears out this tribute to the worth of the electrocardiograph by devoting a special section to that instrument and its use, written by Doctor Ritchie, an expert in its employment. The newest data derived from the sphygmomanometer, the X-ray, and the pharmacological laboratory also figure prominently in the book.

Altogether, it is a very adequate work upon the heart, well worthy of adoption by the student and the practitioner as their text. We cannot here refrain from remarking upon the excellent character of the paper and press-work, and the very fine quality of the illustrations.

SERVOSS: "THE HYPODERMIC SYRINGE"

The Hypodermic Syringe. By George L. Servoss, M. D., editor of *Nevada Medicine*. Newark, N. J.: The Physicians' Drug News Company. 1914.

On first taking up this book, our very natural feeling was one of wonder as to how the author could find enough to say about so small an article as the hypodermic syringe to fill a volume of over 300 octavo pages. Further examination, however, disclosed the fact that the actual content of the book transcends its title, and extends into a discussion of the various therapeutic measures which utilize the hypodermic syringe as their administrative agent.

Only one chapter, and a short one at that, really treats of the syringe itself. Five or six chapters are then devoted to the drug-remedies commonly lending themselves to hypodermic medication. These are followed by a very long section dealing with serums and bacterins, this occupying at least two-thirds of the entire book. At the end, there is a short chapter or two on anesthetics and on shock. The doctor who invests in this book, therefore, will really get more than the title would lead him to expect. He will find that the title is figurative rather than literal, and that the work really is a very useful summary of the therapeutics and technic for which the hypodermic syringe stands as a symbol.

MOSBY: "CAUSES AND CURES OF CRIME

Causes and Cures of Crimes. By Thomas Speed Mosby, member of the American Bar. Illustrated. St. Louis: The C. V. Mosby Company. 1913. Price $2.00.

It is simply astonishing to contemplate the change which has taken place in the past

twenty years in our attitude toward crime and the criminal. And it is no exaggeration to say that by far the larger part of this change is due to the direct influence of medicine. Indeed, it would be academically correct to say that medicine is responsible for it all. Medicine has intervened, as the lawyers say, and to a very great extent has forced its views upon the subject of the legal and economic aspects, until we now find legal and economic investigators and authorities talking and writing under the impress of the medical viewpoint.

The book now under review is a capital illustration of this truth. Written by a lawyer, it is a brief for the biologic and medical consideration of crime and criminals. Such a book could not have been written by a lawyer twenty years ago. Yet, the standpoint of the law is represented, too. It is, in fact, a brief presentation, from the legal and forensic standpoint, of the data and conclusions which medicine has brought into court during the period named, and furnishes an excellent summary of the present status of the subject for the man who has not had time or opportunity to follow the march of events for himself. It contains a powerful argument for the parole system of penal administration.

HAWES: "EARLY PULMONARY TUBERCULOSIS"

Early Pulmonary Tuberculosis: Its Diagnosis, Prognosis and Treatment. By John B. Hawes, M. D., director of the Tuberculin Department of the Massachusetts General Hospital. With Preface by Richard C. Cabot, M. D. New York: William Wood & Co. 1913. Price $1.50.

This book by Hawes impresses one as an attempt, and a highly successful one, to present the best knowledge of the time concerning the diagnosis and treatment of tuberculosis in practical, usable shape for the general practitioner, with a view to leaving absolutely no excuse for any neglect or oversight of cases of tuberculosis in their incipient period, when, if ever, the measures at our command may be of some avail. The author has simplified the subject so that he who runs may read. One might almost give his book, just as it is, into the hands of the patient himself; and, indeed, with an intelligent patient this might be an excellent thing to do.

Whether, however, this book be given into lay hands or not, it certainly does furnish the practitioner with all the material with which to go to the patient and enlist his cooperation in an intelligent crusade against the disease which they both are interested in conquering. From start to finish of such a campaign, he may consult Hawes' manual, as he would a guide-book on a trip through the Alps. We have looked through it carefully, and we cannot think of a single thing that the author has not thoughtfully provided for.

BANDLER'S MEDICAL GYNECOLOGY

Medical Gynecology. By Samuel Wyllis Bandler, M. D., Adjunct Professor of Diseases of Women, New York Post Graduate School and Hospital. Third Edition, Thoroughly Revised. With Original Illustrations. Philadelphia and London: W. B. Saunders Company. 1913. Price $6.50.

It is gratifying to note a decided and steady return to sanity on the part of our friends the gynecologists. For many years there seemed to be no place at all in this branch of medical science and practice for therapeutics. Its alpha and omega were surgery. No remedy was offered for the simplest ailment of the most useful pelvic organ except the very obvious one of lopping it off, and no better subject appeared for discussion among gynecologists than the most workmanlike method of lopping. We are unfeignedly glad to know that the hour has struck for all this dazzling butchery to cease, and that physiological gynecology is fast coming into its own. The tide has turned, and whereas there were formerly no internists in gynecology except the smaller and less daring men, now it is the latter who resort to surgery in every instance, while the gynecological leaders are giving more and more attention to therapeutic and plastic measures.

We rejoice to see that the exploration and development of this rather untrodden territory is being seriously undertaken by those who are competent to work it out—that our great gynecologists are shaking off the spell which has so long held them enslaved to the dazzlements of brilliant surgery, and are going about to establish, deep on the foundations of physiology, a system of gynecology which will reduce the surgical element to a minimum, if it does not cancel it from the equation altogether. Dr. Bandler's book is a contribution to this movement on the part of gynecology, and will be found of immense practical value to the general practitioner who is seeking to make gynecology a part of his therapeutic practice.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 5992.—"Hemorrhoids." "Ulcer of the Colon." Dr. J. C. C., Virginia, presents a very interesting case which I think merits much serious consideration. Every case of rectal hemorrhage must be carefully examined. The fact that his man has hemorrhoids may or may not account for the blood. The ulcer in the sigmoid is significant. It is in such cases that an early diagnosis of malignant disease may be found. Hemorrhage is more constantly a symptom of cancer than of any other rectal disease and particularly when there is pain, tenesmus and frequent small stools.

Many patients whose only symptom was rectal hemorrhage have been sacrificed because a cancer was not diagnosed early. Every patient must be thoroughly examined because a case that today may be curable by operation may in a few months be inoperable and death result. Many patients complaining only of a dull aching in the back, a slight discharge of blood in their stool mixed with more or less mucus neglect calling on their physician because they consider their trouble so lightly.

If the hemorrhage is from a pile that may be easily determined by an examination. During defecation and perhaps before the bowels have completely moved a more or less severe hemorrhage will occur which persists after the toilet is finished. The blood may come in spurts and there is little or no pain. With such a history the rectum should be thoroughly examined in a good light with a speculum. The stretching usually starts the hemorrhage which if it bubbles or spurts denotes the little capillary hemorrhoid which is so difficult to find. If however the patient says there is a feeling as though the rectum were only partially emptied (rectal tenesmus) the hemorrhoid large and blue will usually be found within the grasp of the sphincters and unless it is replaced this straining may continue for hours.

Other causes of rectal hemorrhage are Villous tumors with a broad base. These are slow growing, have a spongy feel and are dark red in color, the Polypus with its smooth, elastic pear-shaped body attached by a long, slender pedicle and also the ulcerations due to proctitis, tuberculosis and syphilis.

In the patient described by J. C. C., I am inclined to think that one of these causes is the seat of his trouble. It is well to remember that hemorrhoids are always the result of some other trouble, sometimes acute and at other times protracted, which must be eliminated before any plan of treatment is determined. Sometimes we may operate or again we must be content with temporizing. Atheromatous or apoplectic subjects are relieved of the danger of cerebral ruptures by the loss at nature's safety valve. When cirrhosis of the liver is the cause of the hemorrhoids we dare not operate because either the wound would not heal, other hemorrhoids will promptly appear higher up or dropsy will supervene.

Dr. J. C. C.'s patient is most interesting and I hope we may know more of the course of the disease.

I shall soon present in these columns a paper showing the necessity of the details in examining patients with rectal disturbances.

CHARLES J. DRUECK.

Chicago, Ill.

ANSWER TO QUERY 5993.—J. C. H., Texas. "Fistula in Ano." There is perhaps no more perplexing affliction than a rectal fistula. Dr. Tuttle after gathering 2196 cases days that less than 45 percent were claimed to be cured. Such figures however should not be. Nearly all rectal fistula can be cured except the malignant or tubercular.

The most common cause of these sinuses is infection localized in or about the rectum, as for example intestinal disturbances set up

proctitis or sigmoiditis which results in ulceration. The lymphatics carry off the toxin and an overloaded lymph gland breaks down. The abscess ruptures, contracts and partly heals, and a fistula remains. Or the infection may be in some neighboring organ, as the bladder, urethra, vagina or uterus, a suppurating broad ligament or ovary or a necrosed bone or vertebra. This infection may or may not burrow into the rectum. Just because your patient has a fistulous opening upon the buttock do not presume it must be from within the rectum. Find out just what it is and then you will double your percentage of cures.

The reason most fistula persist is because of reinfection, and this may occur in a number of ways.

First, there is contact infection by such ways as (a) forcing of fecal matter into the sinus from the bowel. (b) Outside infection through the external opening. (c) Retention of the secretions due to the small openings or irregular shape of the fistula. (d) Degenerating granulations lining the sinus and often associated with dense cicatricial tissue outside of this. In a second class of cases the venous or lymphatic circulation is at fault. The human animal spends most of his hours sitting or standing and in this position there is a sluggish return circulation. Sometimes a sinus may fail to heal even though it is thoroughly cleaned because the lymphatic connection is still carrying infection from the rectum (ulcer or proctitis). Draining the abscess temporarily relieves the system, but as the primary source is still present a virulent reinfection occurs. This is an important factor because the phagocytic action of the white corpuscles is insufficient.

I do not pack my fistula wounds because it obstructs the drainage. A very little back pressure is perhaps all that is needed to drive infection into new cellular tissue and start a new focus. It also prevents rest to the parts. I give my patients hot antiseptic irrigations and sitz baths during the whole period of cicatrization. This relieves the venous and lymphatic circulations. I also add a good tonic and internal antiseptics as needed.

CHARLES J. DRUECK.

Chicago, Ill.

Queries

QUERY 6014.—"Diet in Diabetes." E. S., Wisconsin, requests us to publish a diet chart for diabetics.

As a sample of a preliminary diet, which we have found to meet the requirements in the majority of well-defined cases, the following menu for a day may serve as a guide:

Breakfast: Tea, 5 Grams, infused in 200 Cc. of boiling water; ham, 150 Grams; 1 poached or soft-boiled egg.

Lunch: Cold roast beef, 200 Grams; cucumber, 60 Grams, with vinegar or lemon-juice, 5 Grams; olive-oil, 10 Grams; salt and pepper to suit the taste; Apollinaris water, 400 Cc., with (or without) 20 Cc. of brandy; coffee without milk or sugar.

Dinner: Clear bouillon, 300 Cc.; beef, 250 Grams; butter, 10 Grams; green salad, 80 Grams; vinegar, 10 Grams; olive-oil, 20 Grams; 3 sardines; Apollinaris water, 400 Cc.

Supper: Two eggs; Seltzer water, 400 Cc.

If you have access to Hare's "Modern Treatment," we suggest reading pages 439, 440 and 441 of volume ii, where you will find the Goodall chart reproduced. Here, also, Hare calls attention to the advisability of considering together the results of urinary tests with the records made of the diet, saying, "My own treatment of patients has notably improved since I began the use of combined dietary and urinary charts."

It must be remembered that the diet of even a normal individual varies greatly. However, a normal ration for a man at work would contain about 450 Grams of carbohydrate and 100 Grams of protein, equivalent to 15 Grams of nitrogen and 75 Grams of fat; hence, two-thirds of the diet consists of carbohydrates. With a properly prepared diet-chart the quantities of carbohydrates, protein, and fat can easily be calculated.

The diet of the diabetic patient should contain the same number of calories as that of the normal individual, and in addition sufficient to offset the loss of sugar and b-oxybutyric acid, together with the loss due to increased metabolism.

In reckoning the total calories, it is always necessary to bear in mind that for each Gram of sugar in the urine, 4 calories are lost in the organism, and for each Gram of b-oxybutyric acid, 5 calories.

Instead of instituting immediately a carbohydrate-free diet, Hare recommends, in untreated cases of ordinary severity, the restriction in the neighborhood of 150 Grams; the patient being provided with the Goodall

chart and told to eat anything there recorded, provided the total carbohydrates do not exceed 150 Grams. After forty-eight hours, the urine is examined, and frequently voidings carrying 5 percent, or even more, of sugar at the outset, become sugar-free.

On the other hand, the appearance of acidosis in a patient upon the above diet shows the disease to be of a severe or at least moderately severe type. Most diabetic patients seldom become sugar-free upon a diet containing 150 Grams, and it is necessary to restrict the quantity to 125 Grams, preferably by omitting milk. If sugar still persists at the end of twenty-four hours, the bread ration is cut one-half, the next day the rest is withheld. Should sugar continue to be present and acidosis absent, further restriction of the carbohydrates follows, and oatmeal is omitted or the allowance of fruit reduced one-half, so that the patient receives from 70 to 75 Grams of carbohydrates. Should it be necessary to reduce them further, place the patient upon a protein and fat diet, with the addition of 500 Grams of vegetables containing from 5 to 10 percent (not more) of carbohydrates, and 250 Cc. of cream; the entire amount of food containing 16 Grams of carbohydrates. Almost always the urine becomes sugar-free under such circumstances.

The Goodall-Hare method of diet is extremely simple and should prove satisfactory in the great majority of cases.

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QUERY 6015.—"Urethral Fistula." J. R. P., California, has under treatment a case of fistula penile, which refuses to heal, and he would like our opinion as to the best course to pursue. The patient had gonorrhea, and just back of the glans penis the mucous membrane swelled up and pointed like a boil and finally broke, producing a fistula leading from the outside into the urethral canal. Strong astringent and even eschrotic solutions do not seem to have the effect of closing it up. The patient's general health seems to be good, except that any scratch or abrasion of the skin heals up slowly. When the patient urinates, the urine comes out at the orifice as well as at the meatus.

It is quite evident that in this case your patient suffered from a periurethritis or a periurethritic abscess in the fossa of the frenum. This is not an uncommon condition. The nodule due to the inflamed urethral glans is about the size of a pea when in the region of the frenum. If incised before suppuration has begun, it will be found solid; later, when the abscess is formed, we have a thin-walled sac of pus. If you have access to Guiteras' "Urology," you will find, on pages 475 and 476, cuts illustrating the condition exactly.

Acute glandular inflammation of one of the glands of Littré occurs usually in the second or third week of an acute attack of urethritis. The nodule may disappear (undergoing resolution), rupture into the urethra or burst externally. After rupture of the abscess, the lesion may heal or leave a suppurating sinus leading into the urethra, opening externally, or both ways, and result in a narrow urinary fistula.

It must be borne in mind that infection may remain in such sinus for a very long time, and whenever the patient has a recurrence or relapse of urethritis, an abscess or discharge into the sinus will accompany it. Usually a fistula situated about the frenum is short and straight, surrounded by cicatricial tissue and behind a stricture of the canal in the fossa navicularis. The outer end is generally round, about the size of the head of a pin.

Treatment is surgical, the operations comprising urethrorrhaphy and urethroplasty. For technic, see Guiteras or similar modern work on genitourinary diseases. Good results may follow electrical treatment of such fistulas.

Insert a dull-pointed needle-electrode (attached to the negative pole of the galvanic battery) into the fistula (the indifferent pole being placed to any part of the body) and turn on the current. After the electrolytic action has taken place for thirty to sixty seconds, disconnect and pass a small soft-rubber catheter into the bladder, and retain it in place for a few days, to prevent the urinary stream from again dilating the fistulous tract.

If any stricture of the meatus or urethra in the region of the fossa navicularis exists, it should be cut before the fistulous sinus is subjected to electrical treatment. In this way, subsequent strain of the sinus during micturition is prevented.

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QUERY 6016.—"Contracture of Digits Following Burn." J. E. H., Texas, writes: "I am treating a child, eighteen months old, who was burned in the palm of the hand. He dressed the hand straight, anticipating drawing of the fingers. Now one finger and thumb are drawn toward the palm—half closed. The flexor side of the finger and thumb look as though a cord was pulling them down. Of course, that is cicatricial tissue, involving only the flexor side and could be dissected out; but, what I want to know is, whether you would advise doing this,

and to what extent? The main body of the burn is in the palm. Would you dissect this tissue away from the fingers only or try to get it all away?

"In treating females for gonorrhea, when you find little growths about the meatus, would you excise such or apply remedies to reduce them? How long would you use gonococcus bacterin?"

I should think that it would suffice to sever the cicatricial bands, secure full extension of the extremities, and then bring the severed surfaces together in a direction opposite to that previously existent. Extension of the finger should be maintained until the new cicatrix has lost all tendency to reproduce the deformity. However, bear in mind, doctor, that a certain degree of extensibility exists in cicatricial tissue. Continued traction and pressure (never violence) may permit the affected members to assume ultimately an almost normal position.

Injections of thiosinamin and exposure of the cicatricial tissue to the x-ray may result in absorption.

If conditions are such that section of the contracting bands will not suffice, you must dissect away the cicatricial mass at the digital ends. Be sure that enough cicatricial tissue is removed to allow free movements and extension of the fingers. If the hand-grasp and palmar movement are not materially interfered with, we see no reason for more extensive dissection. It is impossible, of course, without a most thorough examination (and, perhaps, incision) to form an intelligent opinion as to the condition of the tendons, but, in all probability, they are intact.

The treatment of the small growths about the urinary meatus in the female depends, necessarily, upon their character. Caruncles should be excised, and small excrescences destroyed by the application of silver nitrate or lactic acid. I have found many of these growths disappear under the application of thuja. See any modern work on the treatment of female diseases, especially would I recommend "Urology," by Guiteras.

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QUERY 6017.—"Masturbation by Female Child." A. W. T., California, forwards a specimen of urine for examination and presents the following clinical data: "The patient, a girl of 7 1-2 years, was adopted by well-to-do people at the age of eighteen months. She masturbates steadily and her case has baffled several physicians. In addition to other measures, her clitoris has been unhooded, but all without much benefit. Her mother was of a very kind disposition, fond of music, and intelligent, but of a most frivolous nature. Her father was of English-Scotch descent. Everything imaginable, regardless of trouble and expense, has been tried; but the child, who is of a very kind disposition and unusually intelligent, seems unable to resist the impulse to the bad practice. Her urine has always been very offensive of odor, but this was relieved by the use of urotropin. Whenever the urine remains in contact with the skin it excoriates the latter to the extent of leaving a scar; which tendency, however, also is controlled by the urotropin. While she still was very young she was heard to laugh and talk to herself in the night, after a man had exposed his person to her and fondled her genitals. Since her hands have been kept tied above her head when put to bed, she is somewhat better. When caught in the act, she will hold her hands out and request her mother to punish her, and she tries, it seems, all she can to overcome this morbid desire. Personally, I have never examined the girl, but intend to do so as soon as I get your report on the urine; meanwhile awaiting whatever suggestions you may kindly offer."

While our pathologist has tested the specimen of urine qualitatively, it is to be regretted that you failed to state the total amount voided in twenty-four hours, so that we are unable to estimate the total solids and urea. However, the test shows a state of marked acidemia and oxaluria, and this justifies the surmise that possibly the girl's tendency to masturbate to a great extent results from local irritation, caused by the high acidity of the urine and the passage of oxalates.

Let us warn you not to be too ready to believe that the bad habit started after the child witnessed the exposure by the man, as related. Indeed, at such an early age, if any impression at all were made, it rather would have been one of fear. It is different, though, if any person handled the child improperly, for then the masturbating habit might have been started.

Frankly, though, we are inclined to believe that all such extraneous influences can be ignored and that you are dealing with an autotoxemic neurotic child. If you will proceed to correct the disordered body-chemistry, relieve the local irritation, and call to aid psychotherapeutic influences—that is, gently, but firmly, impress upon the little one the conviction that she can, that she will, overcome her habit—you will win out. It is of no use to present the higher

moral aspect of the matter, but the mother or you yourself can make her understand that "nice children do not do such things," and that she is injuring herself and will, as she grows older, become a nervous, ill-featured, and unprepossessing girl, instead of (what she naturally wishes to be) a pretty, pleasing, and respected young woman.

It would be well, of course, for the mother to go into the sex-matters gradually, clearing away any mystery that may exist in the girl's mind and make her understand the importance of woman's mission and the necessity for moral and physical cleanliness in mothers-to-be.

I have been successful in getting children to understand these things by comparing them with other habits that are to them particularly objectionable. For example, Lucy L. picks her nose, and is, therefore, a very unpleasant child; picking of the nose will not prove really injurious, whereas masturbation, being practiced in secrecy, is of itself, unobjectionable to others, yet, inevitably is going to work harm to herself; that it not only affects her character, but will render her unable to keep up with normal girls in school, society, and business, leaving a definite, always distinguishable mark upon her physical being.

If the habit has become very firmly established, explain to her that, in order to enable her to overcome the trouble, it will be necessary to use some restraint for a time; but don't tie her hands over her head, or tell her bogie stories of any kind, for in this way you only will defeat your object by arousing her indignation and opposition. It is a simple matter to place the child's hands in gloves and fasten the latter with safety-pins to a belt. Also, the body itself may easily be protected from handling, by suitable covering.

All measures will fail, however, unless the real condition for this morbid desire (that is, the irritation) is corrected. Of course, if there is a distinct erotic taint or even a strongly marked sexual tendency, there is going to be more or less trouble always, and we can only regret that the foster parents made such an unfortunate selection.

The English-Scotch parentage of the child, mentioned in the letter, should guarantee a certain amount of moral stamina. Also, the fact that she requests the mother to punish her proves very conclusively that, while she cannot really understand why the action is wrong, she is willing to believe it to be so and to try to refrain from doing something she should not do. But bear in mind, doctor, that it is a difficult matter to make a child really believe that she should not scratch a place which itches; the natural instinct transmitted through a host of ancestors teaches us that itching is relieved by scratching, just the same as we should unconsciously place our hand over an area suddenly bruised or spit out some obnoxious substance from the mouth. You must realize that here you have an "itchy spot," and that the tendency is to scratch or rub it. Base your treatment upon this primary fact, then slowly but gently instruct the little one on the moral phase of the matter.

I would suggest that the parts be thoroughly cleansed with a mild alkaline solution, morning and night, then inunct with mild borated petrolatum or equal parts of white petrolatum and ointment of zinc oxide. If there is any local congestion, apply aqueous calendula and hamamelis freely in place of the alkaline solution. Also, look out carefully for pinworms.

Internally, give nucleinated phosphates, two granules between meals; 15 to 20 grains of sodoxylin, dry on the tongue and swallowed with a little water, an hour before food; 2 drops of dilute hydrochloric acid in sweetened water (call it lemonade) with meals. The bowels must be kept open. The skin must be made active with salt sponge-baths. The child should sleep lightly covered.

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QUERY 6018.—"Paralysis of Bladder." T. E. T., Iowa, was called upon to treat an unmarried man of 64 for retention of urine, and was told that thirty years ago he contracted gonorrhea, but that it did not give him much trouble. The catheter, T. E. T. explains, entered the bladder without difficulty; urethra, however, was very tender. That was March 1. At present there is no tenderness in the urethra, but the patient has to use the catheter all the time to empty his bladder; the latter is not sensitive. For washing out the bladder, as much as 3 pints of water is being used, but the patient cannot feel the distention of the bladder, nor has he any desire to urinate. His bowels have to be moved with laxatives. The prostate gland is not enlarged. After twelve days of this treatment the patient felt much better and has continued to feel quite well.

To overcome hyperacidity, alkalis, strychnine, and diuretics, together with high-frequency-current vibrasage, and dilatation of the rectum have been employed. The catheter passes through the urethra and enters the bladder with ease, and no trouble to

draw the water is experienced. There is no dribbling of urine. The bladder seems to be entirely inert. No symptoms of uremia are present. The patient has been a farmer for most of his life. He does not use intoxicating liquors or tobacco; is regular in his habits. What can be done?

Before we can prescribe for your patient intelligently, doctor, we must have a much clearer idea of the underlying conditions. It would be well to send to our pathologist, for examination, a specimen of urine (4 ounces from the 24-hour output, stating total quantity voided), together with a specimen of prostatic discharge.

The fact that you can inject as much as 3 pints of water into the bladder without the patient's feeling the distention would lead us to suspect vesical paralysis. Still, under such circumstances, it is rather peculiar that the vesical sphincter is not involved.

Obstruction evidently may be excluded. Besides, you state that the prostate gland is not enlarged and no stricture present.

Chronic retention of urine may be obstructive, traumatic or paralytic; it may be due to paraplegia, hemiplegia (from disease or injury), tabes, lateral sclerosis, prostatic hypertrophy, prostatic tumor or abscess or to urethral stricture.

In paralytic cases retention is commonly observed. In all cases where the bladder wall is partly or entirely paralyzed, more or less residual urine exists, and cystitis is sooner or later set up.

In atony of the bladder, cold spongings, or douchings over the pubes, counterirritation over the spine, and the administration of large doses of strychnine are indicated. Intravesical injections of cold water, beginning with tepid and gradually decreasing the temperature to 60 degrees, may be tried.

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QUERY 6019.—"Congestive Dysmenorrhea." C. H. S., Indiana, asks advice in the case of a woman of 48, primipara, who has had no miscarriage. Menses were regular up to August, 1912, then became irregular; three weeks between periods, and the flow lasting eight or nine days. Since August, the periods are painful and clots are passed. For the past year the flow continues fifteen to nineteen days, and the woman suffers very much. She locates the pain over the left ovary, and the Doctor detects a hardness in that region. The womb is indurated and enlarged. There is no ulceration, only just an inflamed condition of the cervix. She passes blood, also a yellowish watery fluid of a bad odor. She is a large woman, weighing about 175 pounds; does not have a really bad appearance, although somewhat anemic. Appetite is fairly good. She is very nervous. "Have we symptoms of cancer in this patient?"

It is, of course, impossible for us to venture a diagnosis without a much clearer conception of basal pathological conditions. It is possible that the woman suffers from endometritis. As you are aware, congestive or colicky dysmenorrhea is nearly always associated with some local diseases of the pelvic organs —parametritis, salpingitis, ovaritis, endometritis, fibroid tumor of the uterus, subinvolution, retroversion, misplacement of the tubes or ovaries, or a combination of some of these factors.

"Colicky" dysmenorrhea occurs frequently when the uterus is trying to expel a clot or fragment of mucous membrane, or other body. In ordinary menstruation, the amount of the blood lost is not sufficient to prevent its escape from the uterine cavity, but, if the hemorrhage is excessive or the outlet narrow, the blood is held up in the womb and then clots. These clots must be expelled, the uterus has to contract more forcibly, "colicky" dysmenorrhea results, and this condition continues until the irritating clots are expelled.

On the whole, we are inclined to suspect that your patient has salpingitis or ovaritis; still, the possibility of the presence of a malignant neoplasm must not be lost sight of.

You should send specimens of the blood (for the Abderhalden test) and of the uterine discharge (the yellowish watery fluid) to our pathologist, for examination. At the same time, outline diagrammatically the area of tenderness and hardness in the ovarian region. Is there any possibility of venereal taint?